Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

Bid Receiving Public Works and Government Services Canada/Réception des soumissions Travaux publics et Services gouvernementaux Canada
Government of Canada Building
101 - 22nd Street East, Suite 110
Saskatoon
Sask.
S7K 0E1
Bid Fax: (306) 975-5397

REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION

Proposal To: Public Works and Government Services Canada

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

Proposition aux: Travaux Publics et Services Gouvernementaux Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

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THIS DOCUMENT CONTAINS A SECURITY REQUIREMENT

****

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Public Works and Government Services Canada/Réception des souissions Travaux publics et Services gouvernementaux Canada
Government of Canada Building
101 - 22nd Street East
Suite 110
Saskatoon
Saskatche
S7K 0E1

Title - Sujet
Cadet Leadership & Challenge Trng

Solicitation No. - N° de l'invitation	**Date**
W4295-15C022/A	2016-04-08

Client Reference No. - N° de référence du client
W4295-15C022

GETS Reference No. - N° de référence de SEAG
PW-$STN-197-4885

File No. - N° de dossier	**CCC No./N° CCC - FMS No./N° VME**
STN-5-38119 (197)	

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM
on - le 2016-05-24

Time Zone
Fuseau horaire
Central Standard Time
CST

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☐ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à:	**Buyer Id - Id de l'acheteur**
Holt, Judy	stn197

Telephone No. - N° de téléphone	**FAX No. - N° de FAX**
(306) 241-6148 ( )	(306) 975-5397

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:
See herein

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	**Delivery Offered - Livraison proposée**
See Herein	

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Telephone No. - N° de téléphone
Facsimile No. - N° de télécopieur

Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)
Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)

Signature **Date**

Canada

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION

1.1 Introduction

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

Part 1 General Information: provides a general description of the requirement;

Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;

Part 3 Bid Preparation Instructions: provides bidders with instructions on how to prepare their bid;

Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;

Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;

Part 6 Security and Other Requirements: includes specific requirements that must be addressed by Bidders; and

Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Statement of Work, the Basis of Payment, Security Requirements, the Security Requirements Checklist, the Federal Contractors Program for Employment Equity - Certification, the Insurance Requirements, DND 626 Task Authorization Form and any other annexes.

1.2 Summary

The Department of National Defence has a requirement for the provision of Cadet Leadership and Challenge Training as detailed herein for a period from the date of award to 28 February 2018 with three (3) additional one year option years.

There are security requirements associated with this requirement. For additional information, consult Part 6 - Security, Financial and Other Requirements, and Part 7 - Resulting Contract Clauses. For more information on personnel and organization security screening or security clauses, Bidders should refer to the Industrial Security Program (ISP) of Public Works and Government Services Canada (http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html) website.

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT).

The Federal Contractors Program (FCP) for employment equity applies to this procurement; see Part 5 – Certifications and Additional Information, Part 7 - Resulting Contract Clauses and the annex titled *Federal Contractors Program for Employment Equity - Certification*.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.
Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2016-04-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: sixty (60) days
Insert: one hundred and eighty (180) days

2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

2.3 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

Definitions

For the purposes of this clause,"former public servant" is any former member of a department as defined in the *Financial Administration Act*, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

a. an individual;
b. an individual who has incorporated;
c. a partnership made of former public servants; or
d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the *Public Service Superannuation Act* (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the *Supplementary Retirement Benefits Act*, R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the *Canadian Forces Superannuation Act*, R.S., 1985, c. C-17, the *Defence Services Pension Continuation Act*, 1970, c. D-3, the *Royal Canadian Mounted Police Pension Continuation Act* , 1970, c. R-10, and the *Royal Canadian Mounted Police Superannuation Act*, R.S., 1985, c. R-11, the *Members*

of Parliament Retiring Allowances Act, R.S. 1985, c. M-5, and that portion of pension payable to the *Canada Pension Plan Act*, R.S., 1985, c. C-8.

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes** ( ) **No** ( )

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

a. name of former public servant;
b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes** ( ) **No** ( )

If so, the Bidder must provide the following information:

a. name of former public servant;
b. conditions of the lump sum payment incentive;
c. date of termination of employment;
d. amount of lump sum payment;
e. rate of pay on which lump sum payment is based;
f. period of lump sum payment including start date, end date and number of weeks;
g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is $5,000, including Applicable Taxes.

2.4 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.5 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Alberta.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

2.6 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least twenty (20) days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

Canada requests that Bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (four (4) hard copies)
Section II: Financial Bid (one (1) hard copy)
Section III: Certifications (one (1) hard copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that Bidders follow the format instructions described below in the preparation of their bid:

(a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
(b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement (http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html). To assist Canada in reaching its objectives, Bidders should:

1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and

2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Section II: Financial Bid

3.1.1 Bidders must submit their financial bid in accordance with the Basis of Payment in Annex "B". The total amount of Applicable Taxes must be shown separately.

3.1.2 Exchange Rate Fluctuation
C3011T (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications
Bidders must submit the certifications and additional information required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

(a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.

(b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation
Mandatory and point rated technical evaluation criteria are included in Annex C – Evaluation Criteria

4.1.2 Financial Evaluation
SACC Manual Clause A0220T (2014-06-26), Evaluation of Price

4.2 Basis of Selection

4.2.1 Basis of Selection - Highest Combined Rating of Technical Merit and Price

1. To be declared responsive, a bid must:

    a. comply with all the requirements of the bid solicitation; and
    b. meet all mandatory criteria; and
    c. obtain the required minimum of 77 points overall for the technical evaluation criteria which are subject to point rating.

    The rating is performed on a scale of 128 points.

2. Bids not meeting a) or (b) or (c) will be declared non-responsive.

3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 60 % for the technical merit and 40 % for the price.

4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 60 %.

5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 40 %.

6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.

7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is $45,000 (45).

Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)

		Bidder 1	Bidder 2	Bidder 3
Overall Technical Score		115/135	89/135	92/135
Bid Evaluated Price		$55,000.00	$50,000.00	$45,000.00
Calculations	**Technical Merit Score**	115/135 x 60 = 51.11	89/135 x 60 = 39.56	92/135 x 60 = 40.89
	Pricing Score	45/55 x 40 = 32.73	45/50 x 40 = 36.00	45/45 x 40 = 40.00
Combined Rating		83.84	75.56	80.89
Overall Rating		1st	3rd	2nd

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the *Ineligibility and Suspension Policy* (http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the Ineligibility and Suspension Policy (http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the Employment and Social Development Canada (ESDC) - Labour's website

(http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969#afed).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

5.2.3 Additional Certifications Precedent to Contract Award

5.2.3.1 Status and Availability of Resources
SACC Manual clause A3005T (2010-08-16) Status and Availability of Resources.

5.2.3.2 Education and Experience
5.2.3.2.1 *SACC Manual* clause A3010T (2010-08-16) Education and Experience

PART 6 – SECURITY AND OTHER REQUIREMENTS

6.1 Security Requirements

1. Before award of a contract, the following conditions must be met:

   (a) the Bidder must hold a valid organization security clearance as indicated in Part 7 - Resulting Contract Clauses;

   (b) the Bidder's proposed individuals requiring access to classified or protected information, assets or sensitive work site(s) must meet the security requirements as indicated in Part 7 - Resulting Contract Clauses;

   (c) the Bidder must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites;

2. Bidders are reminded to obtain the required security clearance promptly. Any delay in the award of a contract to allow the successful Bidder to obtain the required clearance will be at the entire discretion of the Contracting Authority.

3. For additional information on security requirements, Bidders should refer to the Industrial Security Program (ISP) of Public Works and Government Services Canada (http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html) website.

6.2 Insurance Requirements

6.2.1 Insurance - Proof of Availability Prior to Contract Award
The Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in Annex E.

If the information is not provided in the bid, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

PART 7 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

7.1 Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex A.

7.1.1 Task Authorization

The Work or a portion of the Work to be performed under the Contract will be on an "as and when requested basis" using a Task Authorization (TA). The Work described in the TA must be in accordance with the scope of the Contract.

7.1.1.1 Task Authorization Process

Task Authorization:

The Work or a portion of the Work to be performed under the Contract will be on an "as and when requested basis" using a Task Authorization (TA). The Work described in the TA must be in accordance with the scope of the Contract.

Task Authorization Process:

1. The Project Authority will provide the Contractor with a description of the task using the "DND 626, Task Authorization Form" form specified in Annex G.
2. The Task Authorization (TA) will contain the details of the activities to be performed, a description of the deliverables, and a schedule indicating completion dates for the major activities or submission dates for the deliverables. The TA will also include the applicable basis(bases) and methods of payment as specified in the Contract.
3. The Contractor must provide the Project Authority, within 5 calendar days of its receipt, the proposed total estimated cost for performing the task and a breakdown of that cost, established in accordance with the Basis of Payment specified in the Contract.
4. The Contractor must not commence work until a TA authorized by the Project Authority has been received by the Contractor. The Contractor acknowledges that any work performed before a TA has been received will be done at the Contractor's own risk.

7.1.1.2 Task Authorization Limit

The Project Authority may authorize individual task authorizations up to a limit of $ 400,000, Applicable Taxes included, inclusive of any revisions.

Any task authorization to be issued in excess of that limit must be authorized by the Project and Contracting Authority before issuance.

7.1.1.3 Minimum Work Guarantee - All the Work - Task Authorizations

1. In this clause,

   "Maximum Contract Value" means the amount specified in the "Limitation of Expenditure" clause set out in the Contract; and

   "Minimum Contract Value" means 30%.

2. Canada's obligation under the Contract is to request Work in the amount of the Minimum Contract Value or, at Canada's option, to pay the Contractor at the end of the Contract in accordance with paragraph 3. In consideration of such obligation, the Contractor agrees to stand in readiness throughout the Contract period to perform the Work described in the Contract. Canada's maximum liability for work performed under the Contract must not exceed the Maximum Contract Value, unless an increase is authorized in writing by the Contracting Authority.

3. In the event that Canada does not request work in the amount of the Minimum Contract Value during the period of the Contract, Canada must pay the Contractor the difference between the Minimum Contract Value and the total cost of the Work requested.

4. Canada will have no obligation to the Contractor under this clause if Canada terminates the Contract in whole or in part for default.

7.1.1.4 Periodic Usage Reports - Contracts with Task Authorizations
The Contractor must compile and maintain records on its provision of services to the federal government under authorized Task Authorizations issued under the Contract.

The Contractor must provide this data in accordance with the reporting requirements detailed below. If some data is not available, the reason must be indicated. If services are not provided during a given period, the Contractor must still provide a "nil" report.

The data must be submitted on a quarterly to the Contracting Authority.

The quarterly periods are defined as follows:
1st quarter: April 1 to June 30;
2nd quarter: July 1 to September 30;
3rd quarter: October 1 to December 31; and
4th quarter: January 1 to March 31.

The data must be submitted to the Contracting Authority no later than 15 calendar days after the end of the reporting period.

Reporting Requirement- Details
A detailed and current record of all authorized tasks must be kept for each contract with a task authorization process. This record must contain

For each authorized task:
i. the authorized task number or task revision number(s);
ii. a title or a brief description of each authorized task;
iii. the total estimated cost specified in the authorized Task Authorization (TA) of each task, exclusive of Applicable Taxes;
iv. the total amount, exclusive of Applicable Taxes, expended to date against each authorized task;
v. the start and completion date for each authorized task; and
vi. the active status of each authorized task, as applicable.

For all authorized tasks:
i. the amount (exclusive of Applicable Taxes) specified in the contract (as last amended, as applicable) as Canada's total liability to the contractor for all authorized TAs; and
ii. the total amount, exclusive of Applicable Taxes, expended to date against all authorized TAs.

7.1.1.5 Task Authorization - Department of National Defence

The administration of the Task Authorization process will be carried out by **TBD**. This process includes monitoring, controlling and reporting on expenditures of the contract with task authorizations to the Contracting Authority.

7.2 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual(https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

7.2.1 General Conditions

2035 (2016-04-04), General Conditions - Higher Complexity - Services, apply to and form part of the Contract.

7.3 Security Requirements

7.3.1 . The following security requirements apply and form part of the Contract.

SECURITY REQUIREMENT FOR CANADIAN SUPPLIER:
PWGSC FILE: W4295-15C022

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid **Designated Organization Screening (DOS),** issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).

2. The Contractor/Offeror personnel requiring access to sensitive work site(s) must EACH hold a valid **RELIABILITY STATUS**, granted or approved by CISD/PWGSC.

3. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of CISD/PWGSC.

4. The Contractor/Offeror must comply with the provisions of the:

   (a) Security Requirements Check List and security guide (if applicable), attached at Annex F
   (b) Industrial Security Manual (Latest Edition).

7.4 Term of Contract

7.4.1 Period of the Contract

The period of the Contract is from **date of Contract to 28 February 2018.**

7.4.2 Option to Extend the Contract

The Contractor grants to Canada the irrevocable option to extend the term of the Contract by up to three (3) additional one (1) year periods under the same conditions. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

Canada may exercise this option at any time by sending a written notice to the Contractor at least thirty (30) calendar days before the expiry date of the Contract. The option may only be exercised by the Contracting Authority, and will be evidenced for administrative purposes only, through a contract amendment.

7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Judy Holt
Procurement Specialist
Public Works and Government Services Canada
101 22nd St E, Suite 110
Saskatoon, SK
S7K 0E1

Telephone: 306-241-6148
Facsimile: 306-975-5397
E-mail address: *judy.holt@pwgsc-tpsgc.gc.ca*

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

7.5.2 Project Authority
The Project Authority for the Contract is: **TBD**

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however, the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

7.5.3 Contractor's Representative

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone: ___-___-_____
Facsimile: ___-___-_____
E-mail address: _____

7.6 Proactive Disclosure of Contracts with Former Public Servants
By providing information on its status, with respect to being a former public servant in receipt of a *Public Service Superannuation Act* (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with Contracting Policy Notice: 2012-2 of the Treasury Board Secretariat of Canada.

7.7 Payment

7.7.1 Basis of Payment – Limitation of Expenditure – Task Authorizations
The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work specified in the authorized Task Authorization (TA), as determined in accordance with the Basis of Payment in Annex B, to the limitation of expenditure specified in the authorized TA.

Canada's liability to the Contractor under the authorized TA must not exceed the limitation of expenditure specified in the authorized TA. Customs duties are excluded and Applicable Taxes are extra.

No increase in the liability of Canada or in the price of the Work specified in the authorized TA resulting from any design changes, modifications or interpretations of the Work will be authorized or

paid to the Contractor unless these design changes, modifications or interpretations have been authorized, in writing, by the Contracting Authority before their incorporation into the Work.

7.7.2 Limitation of Expenditure - Cumulative Total of all Task Authorizations

1. Canada's total liability to the Contractor under the Contract for all authorized Task Authorizations (TAs), inclusive of any revisions, must not exceed the sum of $ **TBD** . Customs duties are excluded and Applicable Taxes are extra.

2. No increase in the total liability of Canada will be authorized or paid to the Contractor unless an increase has been approved, in writing, by the Contracting Authority.

3. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:

    a. when it is 75 percent committed, or
    b. four (4) months before the contract expiry date, or
    c. as soon as the Contractor considers that the sum is inadequate for the completion of the Work required in all authorized TAs, inclusive of any revisions,
    whichever comes first.

4. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority, a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability

7.7.3 Multiple Payments

SACC Manual clause H1001C (2008-05-12), Multiple Payments

7.7.4 T1204 - Direct Request by Customer Department

SACC Manual clause A9117C (2007-11-30) T1204 Direct Request by Customer Department

7.8 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

2. Invoices must be distributed as follows:
    a. The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.

    b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

7.9 Certifications and Additional Information

7.9.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

7.9.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the

name of the Contractor will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

7.10 Applicable Laws
The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Alberta.

7.11 Priority of Documents
If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

(a) the Articles of Agreement;
(b) the general conditions 2035 (2016-04-04), General Conditions – Higher Complexity - Services;
(c) Annex A, Statement of Work;
(d) Annex B, Basis of Payment;
(e) Annex E, Insurance Requirements;
(f) Annex F, Security Requirements Checklist;
(g) Annex G, DND 626 Task Authorization Form;
(h) Annex the signed Task Authorizations (including all of its annexes, if any);
(i) the Contractor's bid dated _____

7.12 Defence Contract
SACC Manual clause A9006C (2012-07-16) Defence Contract

7.13 Canadian Forces Site Regulations
SACC Manual clause A9062C (2011-05-16) Canadian Forces Site Regulations

7.14 Foreign Nationals (Canadian Contractor)
SACC Manual clause A2000C (2006-06-16), Foreign Nationals (Canadian Contractor)

7.15 Insurance Requirements

7.15.1 Insurance – Specific Requirements
The Contractor must comply with the insurance requirements specified in Annex E. The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. For Canadian-based Contractors, coverage must be placed with an Insurer licensed to carry out business in Canada, however, for Foreign-based Contractors, coverage must be placed with an Insurer with an A.M. Best Rating no less than “A-”. The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

ANNEX "A"

STATEMENT OF WORK

1. Title:
Cadet Leadership and Challenge Course (CLCC) - Rocky Mountain National Army Cadet Training Centre (RMNACTC).

2. Background:
The aim of the Cadet Program (CP) is to develop in youth the attributes of good Citizenship and leadership, promote physical fitness, and stimulate the interest of youth in the sea, land and air activities of the Canadian Forces (CF).

The aim of the CLCC is to develop, through the use of unique advanced adventure training leadership and challenge activities, a self-aware outdoor leader with the skills and subject matter knowledge required to act as an activity leader at a Cadet Corps, Expedition Centre or Cadet Training Centre (CTC).

3. Objective:
The Department of National Defence (DND) requires for a contract with task authorization to conducts training for the Royal Canadian Army Cadet Organization in the Rocky Mountain Forest Reserve area of Alberta, for approximately one hundred and sixty two (162) Canadian Cadets, twelve (12) British cadets and associated supervisors. Training is carried out during the months of July and August each year for a period of six (6) weeks. Dates and number of cadets undergoing training is confirmed annually by 1 April.

Training is conducted in six platoons, each consisting of thirty (30) cadets, on a rotating basis. The six (6) platoons alternate through the six (6) cycles of training, which are all conducted concurrently with a different platoon each week. Each platoon is further broken down into ten (10) person groups for training to limit impact on the environment and to meet the requirements of Parks Canada. Under Regional Cadet Support Unit (RCSU) (Northwest) regulations, each group must be under the direct supervision of a Canadian Forces (CF) Officer. The Contractor will provide technical advice, instruction and supervision of training and will work in close consultation with the training authority in matters of detailed scheduling and safety.

The trainees are cadets ranging from 15-18 years, from all parts of Canada and will include unilingual French and English individuals. Also included are individuals from the United Kingdom, who range in age from late teens to early twenties. It is estimated that approximately one-third (1/3) of the trainees will be female.

4. Scope of Work:
The Contractor will be required to provide instruction and supervision in various areas of technical expertise to meet the Performance Objectives (POs) outlined in the course Qualification Standard and Plan (QSP). A copy will be provided to the contractor each spring annually. This QSP is subject to change with respect to the order and layout of training, but not to subject matter without prior consultation between the training authority and the Contractor. Specifically, the Contractor will provide instruction and conduct the appropriate skills activities to meet the course POs as detailed in Chapter 2, Annex A of the course QSP.

Training instructions (latest version to be provided to the contractor each spring annually) apply in principle and the methodology outlined will be used for similar or alternate sites. These training instructions are for guidance and are continually evolving, as Parks Canada rules require new sites and areas to be used. The daily training program outlined in the POs may be utilized as an example for training purposes. The Contractor will be required to integrate their training program to the CSTC established training schedule. Timings may be modified by the CSTC Commanding Officer (CO) as circumstances dictate. DND reserves the right to amend or replace any or all portions of the training requirements with similar or like training in quantity/ type.

DND reserves the right to change the current venue to any new venue that will meet the training requirements. Costs associated with resurvey and development of new training sites resulting from a change of venue will be the responsibility of DND.

Note: A-CR-CCP-7171PG-001 Royal Canadian Army Cadets Leadership and Challenge Qualification Standard and Plan can be found at Appendix 2.

5. Training Schedule:
Training dates will change each year but the training period of six (6) weeks will remain the same. The Contractor will provide lead up and close down time, as required, to meet training goals.

6. Tasks:

6.1 Pre-planning:
The contractor must, upon execution of the contract, but prior to commencing any work, submit to the training authority a plan showing all proposed training sites / trails / rivers, etc, along with proof of being in possession of the necessary park / camping permits, registrations, and licensing required for operating in the proposed National / Provincial Parks or forestry areas;

6.2 Wilderness First Aid:
The Contractor must provide a minimum of two (2) instructors with necessary skills and qualifications to attain the objectives outlined in PO S41 0 –Attain Wilderness First Aid Qualification (see Appendix 2). The Wilderness First Aid course provided to cadets must be 16 hours. Instructors must be accredited by a national first aid training provider and must possess current Wilderness Advanced First Aid (or greater) certification;

6.3 Alpine Trekking:
The Contractor must provide instructors with the necessary technical skills and qualifications to attain the objectives outlined in PO S423 - Alpine Trek on Class 3 Terrain (see Appendix 2). All instructors must possess current Wilderness First Aid (WFA) (or greater) and cardia pulmonary resuscitation (CPR) certification.

The following are the minimum instructor requirements and qualifications, and instructor / student ratios based on acceptable industry wide standards and Parks Canada group size limits:

(1) four (4) Association of Canadian Mountain Guides (ACMG) Backpacking Guides; and
(2) one (1) instructor to nine (9) students;

6.4 Mountain Biking:
The Contractor must provide a minimum of four (4) Mountain Bike Guides / Mechanics with the necessary technical skills and qualifications to attain the objectives outlined in PO S452- Ride a Mountain Bike on Intermediate Trails (see Appendix 2). All instructors must possess a current WFA (or greater) and CPR certification. A minimum of two (2) instructors must have a current Wilderness First Responder (WFR) certification.

The Mountain Bike Guides / Mechanics will also be responsible for:

(1) maintaining the fleet of fifty (50) DND owned mountain bikes on a regular basis. DND will be responsible for providing the tools and parts necessary for maintenance and repair; and
(2) incorporating four (4) staff cadets, provided by the CSTC, into the program;

6.5 Canoe / Kayak:

The Contractor must provide instructors with the necessary technical skills and qualifications to attain the objectives outlined in PO S453A - Manoeuvre a Canoe on Moving Water and PO S453B -Manoeuvre a Kayak on Moving Water (see Appendix 2). All instructors must possess a current WFA (or greater) and CPR certification. A minimum of two (2) instructors must possess a current WFR certification. The following are the minimum instructor requirements and qualifications, and instructor / student ratios based on acceptable industry wide standards:

(1) **canoe:**

(a) minimum of four (4) Moving Water Instructors; and
(b) one (1) instructor to four (4) students; and

(2) **kayak:**

(a) minimum of five (5) Moving Water Instructors; and
(b) one (1) instructor to four (4) students;

6.6 Rock Climbing and Mountaineering:

The Contractor must provide instructors with the necessary technical skills and qualifications to attain the objectives outlined in PO S454 - Climb a Natural Rock Face and PO S455- Mountaineer on a Glacier (see Appendix 2). All instructors must possess a current WFA (or greater) and CPR certification. The following are the minimum instructor requirements and qualifications and instructor/student ratios based on acceptable industry wide standards:

(1) **rock climbing:**

(a) minimum of eight (8) ACMG Guides, of which at least two (2) must be ACMG Rock Guides and/or ACMG Alpine Guides and/or ACMG Alpine Assistant Guides; and
(b) one (1) instructor to four (4) students; and

(2) mountaineering:

(a) minimum of eleven (11) ACMG Guides, of which at least four (4) must be Mountain Guides (summer and winter) certified by the ACMG or by the International Federation of Mountain Guide Association; and
(b) one (1) instructor to three (3) students;

6.7 Horseback Riding:

The Contractor must provide a minimum of three (3) instructors with the necessary technical skills and qualifications to attain the objectives outlined in PO S456- Ride a Horse on Established Trails (see Appendix 2). All instructors must possess a current WFA (or greater) and CPR certification;

6.8 Staff Training:

The Contractor must train all CF members that are associated with the Contractor's field training in the operation of the communications safety net. The Contractor will also provide first aid and field emergency training for all platoon staff (approximately eighteen (18) people) in English and French. The level of training will enable them to respond to field emergencies on all one (1) day hikes or shorter. The Contractor will certify successful candidates to the level of Wilderness First Aid and CPR or greater;

6.9 French Instruction:

The Contractor must be able to provide instruction in French to a minimum of seventy (70) cadets and in English to the remainder (this ratio may change year to year). If the ratio increases and the Contractor is unable to provide the required ratio and has informed RCSU (Northwest) NW Tone

(1) month prior to the beginning of the summer's training, RCSU (Northwest) has the option of changing the ratio in an effort to meet what the Contractor is capable of providing;

6.10 Female Instruction:

The Contractor must be able to provide a corps of instructors comprised of at least one-third (1/3) female instructors. If the ratio increases and the Contractor is unable to provide the required ratio and has informed RCSU (Northwest) NL Tone (1) month prior to the beginning of the summer's training, RCSU (Northwest) has the option of changing the ratio in an effort to meet what the contractor is capable of providing;

6.11 Special Considerations:

The Contractor must work in close consultation with the CF member(s) present who are assigned to oversee the instruction of cadets for matters separate from the technical aspects of the training. The Contractor and its employees must comply with the general rules and instructions applicable to the training centre's operation including any dress code necessary to maintain the centres aims and objectives;

6.12 Communications:

The Contractor will be responsible for all communications including but not limited to the following:

(1) ensuring contracted staff are trained in DND established protocols / operating procedures for the routine and emergency operation of the proposed communications system for each training site;

(2) supplying radios / satellite / cell phones, as applicable, and other necessary equipment to include the CSTC Operations Centre base radio station;

(3) providing all communication while operating away from the CSTC. The minimum requirement will be to maintain communications between the individual groups and between the CSTC and the individual groups. Operations Centre staff will be provided by DND; and

(4) liaising with Parks Canada and other agencies to arrange for access to / provision of services on non-DND controlled communications system;
Note. A list of radio frequencies used in previous years is located at Appendix 1.

6.13 Safety:

The Contractor must maintain a safe training environment that meets the safety standards as outlined in A-CR-CCP-9511PT-002, Royal Canadian Army Cadets Adventure Training Standards, and A-CR-CCP-0301PT-001, Water Safety Orders (both be provided to the Contractor), as it applies to the PO and as it applies to the conduct of such training. The safe training environment must include proceeding to and from any training areas. Where provincial, national, or industry wide standards are more stringent those shall prevail and the contractor must bring these standards to the CSTC CO's attention. The Contractor is responsible for the safe conduct and supervision of all technical aspects related to training as detailed in the course QSP (Appendix 2);

Note: A-CR-CCP-9511PT 002, Royal Canadian Army Cadets Adventure Training Safety Standards can be found at Appendix 3.

A-CR-CCP-0301PT-001, Water Safety Orders can be found at Appendix 4.

6.14 Emergency Planning:

The Contractor must initiate any required emergency procedures related to the requirements of the planned activities. This includes but is not limited to establishing the necessary lines of

communications with rescue authorities, emergency personnel, etc, for the implementation of an Emergency Response Plan. The Contractor must provide the necessary specialist first aid and evacuation equipment necessary to extract casualties from locations. Third party costs associated with any search and rescue procedures shall be borne by DND;

6.15 Instructor Equipment:

The Contractor must ensure that the instructors are equipped and clothed commensurate with the level and type of instruction and training to be undertaken. Instructors must be equipped with individual first aid kits appropriate to the specific training / instruction being conducted. Such first aid kits must be provided by the Contractor;

6.16 Reference Manual:

The Contractor must provide a comprehensive reference manual to their instructors to support the instruction and conduct of each training activity. The Contractor must ensure that the reference manual follows the Lesson Specifications as published in Chapter 4 of the course QSP (Appendix 2);

6.17 Food:

The Contractor must provide rations for instructors during glacier training and alpine trekking;

6.18 Transportation:

The Contractor must provide transportation and drivers to and from all training sites for students, staff and instructors including transport of all equipment, canoes, kayaks, and mountain bikes. Equipment is not to be transported on roof racks. This is to include all-terrain vehicles to be used in support of the mountain biking program. The Contractor's drivers must be in possession of a valid license to operate the vehicle and must complete familiarization training on the vehicles they will be operating. DND will provide canoe / kayak trailers;

6.19 Liaison Personnel:

The Contractor will appoint a person(s) to liaise with, provide advice and brief the CSTC CO about specific training and safety requirements related to the training being conducted. Included will be advice and supervision related medical problems, environmental problems, training issues, etc.

The Contractor will be required to have an on-site manager available on a twenty-four hour on-call basis during all periods when cadets and staff are engaged in training;

6.20 External Agencies:

The Contractor will be required to negotiate and liaise with Parks Canada officials, provincial authorities, and local governments to provide the necessary training areas to complete the POs. This includes obtaining appropriate wilderness passes for treks and trips within the Parks;

6.21 Assessment / Evaluation:

The Contractor must complete the necessary cadet assessments and evaluations for each technical portion, using to the assessment instructions and tools located in Chapter 3 of the course QSP (Appendix 2);

6.22 Final Report:

The Contractor must provide on or before September 15 of each year of the Contract, a written assessment and report on the achievement of the POs. The report is to list observed strengths and weaknesses for each aspect of the training and should contain recommendations for improvement. Equipment deficiencies and recommendations for replacement equipment, including identification of equipment specifications, must be included in the report. Administrative recommendations may also be included;

7. Government Furnished Support/Equipment/In-formation:

DND will provide the following:

a. personal clothing / equipment for all cadets and CF members to a level necessary to achieve the training based on CF technical expertise as detailed in the course QSP (Appendix 2);

b. general equipment necessary to achieve the training based on CF technical expertise as detailed in the course QSP (Appendix 2);

c. internal transportation for military administrative purposes;

d. any third party costs associated with search and rescue procedures;

e. rations and quarters for the Contractor's employees for the duration of the contract to a standard not less than that provided to members of the CSTC, except the rations for the Contractor's employees engaged on glacier training and alpine trekking. These rations shall be the responsibility of the Contractor;

f. administrative and training offices to a level determined by the CSTC CO but not less than the minimum necessary to efficiently carry out the contract requirements. Office requirements would include access to all stationary, supplies and photocopying requirements necessary to complete the POs;

g. A-CR-CCP-717/PG-001 Royal Canadian Army Cadets Leadership and Challenge Qualification Standard and Plan; (See Appendix 2)

h. A-CR-CCP-951/PT 002, Royal Canadian Army Cadets Adventure Training Safety Standards; and (See Appendix 3)

i. A-CR-CCP-030/PT-001, Water Safety Orders. (See Appendix 4)

8. Police Checks/Child Abuse Registry

Police checks are required for all individuals working with 12-18 years old. The original or certified true copy of results of a "Personal Request for Criminal Record Search" through either a local police services or the RCMP as well as proof of verification of a valid check through the Province of Manitoba Child Abuse Registry or equivalent may be required. The results of the check must show that the Contractor is not listed in this Registry or has a criminal record. The above noted verifications are the Contractor's responsibility and proof of verification must be submitted prior to start-up training.

9. Appendix List

a. Appendix 1 - Radio Frequencies;

b. Appendix 2 - Royal Canadian Army Cadets Leadership and Challenge Qualification Standard and Plan;

c. Appendix 3 - Royal Canadian Army Cadets Adventure Training Safety Standards;

d. Appendix 4 - Water Safety Orders.

APPENDIX 1 – RADIO FREQUENCIES

SER	TX	MTS	RX	STN/NET
1.	173.340		173.340	CAMP – OP
2.	172.410		172.410	CAMP – ADM
3.	151.490		151.490	CAMP – TPT
4.	173.220		173.220	CAMP – MED
5.	166.875		164.745	MT BOURGEAU
6.	166.650		166.050	MT HECTOR
7.	167.535		161.165	WILSON
8.	166.935		166.230	SHANK
9.	166.770		166.260	STEPHAN
10.	S.O.		162.400	MÉTÉO
11.	S.O.		162.550	MÉTÉO
12.	157.770	JL	152.510	MONTS CANMORE
13.	157.950	JS	152.690	MONTS CANMORE
14.	158.025	XW	152.765	MONTS EXSHAW
15.	157.935	XT	152.675	MONTS EXSHAW
16.	157.890	YJ	152.630	MONTS COCHRANE
17	157.800	YL	152.540	
18.	157.815	XL	152.555	
19.	157.830	JP	152.570	
20.	157.860	YP	152.600	
21.	157.875	XR	152.615	
22.	157.905	XS	152.645	
23.	157.920	YK	152.660	
24.	157.965	XV	152.705	
25.	157.980	YS	152.720	
26.	173.340		173.340	CAMP – OPS
27.	172.410		172.410	CAMP – ADMIN
28.	151.490		151.490	CAMP – TPT
29.	173.220		173.220	CAMP – MED

Note. Frequency programming is subject to confirmation of frequencies by contractor.

APPENDIX 2, 3 & 4 – SEE ATTACHMENTS

ANNEX "B"

BASIS OF PAYMENT

Applicable taxes are to be excluded from the prices herein
Applicable taxes will be added as a separately item on the invoice, if applicable

The firm all-inclusive price for the provision of all but not limited to materials, equipment, personnel and transportation to perform the work in accordance with Annex "A" – Statement of Work.

Item	Description	Quantities	Unit of Issue	Firm Unit Rate	Extended Value
1. Contract Period Year One (1): Training in Summer 2016					
1.1	Wilderness First Aid Training and Horseback Riding Cycle	6	Cycle	$	$
1.2	Alpine Trekking Cycle	6	Cycle	$	$
1.3	Mountain Biking Cycle	6	Cycle	$	$
1.4	Canoe/Kayak Cycle	6	Cycle	$	$
1.5	Rock Climbing Cycle	6	Cycle	$	$
1.6	Mountaineering Cycle	6	Cycle	$	$
1.7	Staffing Training – First Aid and Field Emergency Training Session	1	Cycle	$	$
2. Contract Period Year Two (2): Training in Summer 2017					
2.1	Wilderness First Aid Training and Horseback Riding Cycle	6	Cycle	$	$
2.2	Alpine Trekking Cycle	6	Cycle	$	$
2.3	Mountain Biking Cycle	6	Cycle	$	$
2.4	Canoe/Kayak Cycle	6	Cycle	$	$
2.5	Rock Climbing Cycle	6	Cycle	$	$
2.6	Mountaineering Cycle	6	Cycle	$	$
2.7	Staffing Training – First Aid and Field Emergency Training Session	1	Cycle	$	$
3. Option Year One (1): Training in Summer 2018					
3.1	Wilderness First Aid Training and Horseback Riding Cycle	6	Cycle	$	$
3.2	Alpine Trekking Cycle	6	Cycle	$	$

3.3	Mountain Biking Cycle	6	Cycle	$	$
3.4	Canoe/Kayak Cycle	6	Cycle	$	$
3.5	Rock Climbing Cycle	6	Cycle	$	$
3.6	Mountaineering Cycle	6	Cycle	$	$
3.7	Staffing Training – First Aid and Field Emergency Training Session	1	Cycle	$	$
4. Option Year Two (2): Training in Summer 2019					
4.1	Wilderness First Aid Training and Horseback Riding Cycle	6	Cycle	$	$
4.2	Alpine Trekking Cycle	6	Cycle	$	$
4.3	Mountain Biking Cycle	6	Cycle	$	$
4.4	Canoe/Kayak Cycle	6	Cycle	$	$
4.5	Rock Climbing Cycle	6	Cycle	$	$
4.6	Mountaineering Cycle	6	Cycle	$	$
4.7	Staffing Training – First Aid and Field Emergency Training Session	1	Cycle	$	$
5. Option Year Three (3): Training in Summer 2020					
5.1	Wilderness First Aid Training and Horseback Riding Cycle	6	Cycle	$	$
5.2	Alpine Trekking Cycle	6	Cycle	$	$
5.3	Mountain Biking Cycle	6	Cycle	$	$
5.4	Canoe/Kayak Cycle	6	Cycle	$	$
5.5	Rock Climbing Cycle	6	Cycle	$	$
5.6	Mountaineering Cycle	6	Cycle	$	$
5.7	Staffing Training – First Aid and Field Emergency Training Session	1	Cycle	$	$

OVERALL (1+2+3+4+5) TOTAL AMOUNTS: $_____

ANNEX "C"
EVALUATION CRITERIA

1. MANDATORY TECHNICAL EVALUATION CRITERIA

The following technical evaluation criteria are mandatory. Bids which fail to submit evidence of meeting the following requested criteria will be deemed non-responsive and will receive no further consideration.

1.1 The bidder must list the instructors/guides they are proposing in the performance of the Contract.

1.2 The following information must be provided for each of the instructors/guides the bidder is proposing: level of qualifications, date on which these were obtained, gender, and language status (i.e. Unilingual English, unilingual French or Bilingual English/French).

1.3 The bidder must demonstrate they have the ability to provide:

(a) A minimum of four (4) Wilderness First Aid (WFA) instructors that are accredited by a national first aid training organization. A minimum of one (1) WFA instructor must be female and a minimum of one (1) must be able to provide instruction in French (i.e. is unilingual French or Bilingual English/French).

(b) A minimum of four (4) Association of Canadian Mountain Guides (ACMG) Backpacking Guides with current Wilderness First Aid (or greater) and CPR certifications. A minimum of one (1) ACMG Backpacking Guide must be female and a minimum of one (1) must be able to provide instruction in French (i.e. is unilingual French or Bilingual English/French).

(c) A minimum of four (4) Mountain Bike Guides/Mechanics with current Wilderness First Aid (or greater) and CPR certifications. A minimum of one (1) Mountain Bike Guide/Mechanic must be female and a minimum of one (1) must be able to provide instruction in French (i.e. is unilingual French or Bilingual English/French).

(d) a minimum of two (2) Mountain Bide Guides/Mechanics proposed in item (c) above with current Wilderness First Responder (WFR) certifications.

(e) A minimum of nine (9) Nationally or Provincially certified Moving Water Instructors with current Wilderness First Aid (or greater) and CPR certifications. A minimum of three (3) Moving Water Instructors must be female and a minimum of three (3) must be able to provide instruction in French (i.e. is unilingual French or Bilingual English/French).

(f) A minimum of two (2) Moving Water Instructors proposed in item (e) above with current Wilderness First Responder (WFR) certifications.

(g) A minimum of eight (8) ACMG Guides considered by the ACMG Technical and Professional Guidelines as appropriate for work in the Rock Climbing program. A minimum of two (2) ACMG Guides must be female and a minimum of two (2) must be able to provide instruction in French (i.e. is unilingual French or Bilingual English/French).

(h) A minimum of two (2) ACMG Guides proposed in item (g) that are certified ACMG Rock Guides

(i) A minimum of eleven (11) ACMG Guides considered by the ACMG Technical and Professional Guidelines as appropriate for work in the Mountaineering program. A minimum of three (3) ACMG Guides must be female and a minimum of three (3) must be able to provide instruction in French (i.e. is unilingual French or Bilingual English/French).

(j) A minimum of two (2) ACMG Guides proposed in item (i) that are certified by the ACMG or by the International Federation of Mountain Guide Association as Mountain Guides (summer and winter)

(k) A minimum of three (3) Horseback Riding Instructors with current Wilderness First Aid (or greater) and CPR certifications. A minimum of one (1) Horseback Riding Instructor must be female and a

minimum of one (1) must be able to provide instruction in French (i.e. is unilingual French or Bilingual English/French).

(l) A minimum of one third of all proposed instructors in items (a) thru (k) above must be female (a minimum of 15 instructors out of a total of 43).

(m) A minimum of 40% of all proposed instructors in items (a) thru (k) above must be able to provide instruction in French (a minimum of 18 instructors out of a total of 43).

2. POINT RATED TECHNICAL EVALUATION CRITERIA

Provided that all the **MANDATORY TECHNICAL EVALUATION CRITERIA** described above are met, the Bids will be evaluated on the basis of the following point rated technical evaluation criteria, therefore, bidders are advised to address each area in sufficient depth to show clearly how effectively the work could be done. Bids which do not give sufficient information will be considered to be non-responsive.

1. STRATEGY, APPROACH, METHODOLOGY

(maximum points this section = 50; minimum required to pass this section = 30)

1.1 The bidder should demonstrate a full understanding of the Statement of Work by discussing its understanding of the military and the military's approach to leadership, discipline and instruction, as it relates to the stated aims of the Canadian Cadet Organization **(10 points)**

1.2 The bidder should demonstrate its proposed approach by:

a) Providing a work plan including plans, timings, and schedules for pre-camp work, training and camp close down including a task schedule showing the number of person days to be spent on each individual task **(20 points)**

b) Providing details of communications system proposed including reliability and types and quantities of communications equipment. Demonstrate knowledge of the area (where differing types of devices will or won't operate properly) **(5 points)**

c) Providing details of how it will handle transportation including a description of the number and types of vehicles proposed

i. Appropriate number of vehicles for each program and the whole program (**5 points)**

ii. Availability at, and strategic positioning for emergency situations and considering communications issues (**5 points)**

iii. Suitability of vehicles for transporting people (injured and uninjured) and equipment (**5 points)**

2. PERSONNEL

(maximum points this section = 72; minimum required to pass this section = 43)

The bidder should:

2.1 identify each of its key personnel (management/course directors) by describing:

a) the roles and responsibilities of the person in charge of the operation who must be accessible at all times for the duration of the camp **(10 points)**
b) the roles and responsibilities of the person responsible for each program **(25 points)**
c) the reporting structure of the key personnel by providing an organization chart **(2 points)**

2.2 demonstrate that each of the key personnel in each program have relevant experience by describing their work on projects of similar nature and scope (i.e. # of trainees; duration of program; coordination of personnel and/or program delivery; multi-disciplinary teams)
(20 points)

2.3 demonstrate experience in dealing with large organized groups and youth in related outdoor activities, such as other cadet camps, school outings.
(15 points)

3. COMPANY
(maximum points in this section = 6; minimum required to pass this section = 4)

3.1 The bidder should demonstrate provision of satisfactory services to groups, organizations or companies for related services performed within the last five years by including written references from at least three different clients. Related services includes work within national parks or other similar areas and work involving minors. **(6 points)**

TOTAL POINTS
maximum points available = 128
minimum required to pass the point rated technical evaluation = 77

3.0 EVALUATION AND RATING

PWGSC Evaluation Board members will evaluate the strengths and weaknesses of the Bidder's response to the evaluation criteria and will rate each criterion using the evaluation table below:

Rating Scales and Categories

	Categories	Maximum Score	5	10	15	20	25
Qualified	Excellent		5	9-10	14-15	18-20	23-25
	Very Good		4	8	12-13	16-17	20-22
	Good			7	11	14-15	18-19
	Fair		3	6	9-10	12-13	15-17
Unqualified	Unsatisfactory		0-2	0-5	0-8	0-11	0-14

CATEGORY DEFINITIONS:

UNSATISFACTORY	FAIR	GOOD	VERY GOOD	EXCELLENT
Plan does not provide details to describe any of the requirements as specified in Annex A Statement of Work.	Plan lacks details on one (1) or more of the requirements as specified in Annex A Statement of Work.	Plan provides details to describe every requirement as specified in Annex A Statement of Work.	Plan provides a clear description of how and/or what is to be accomplished for every requirement, as specified in Annex A Statement of Work, including illustrative materials (i.e. diagrams, maps etc.) where appropriate.	Plan provides a superior description of specifically how and what will be accomplished both quantitatively and qualitatively for their technical approach. The plan provides an innovative, detailed approach for all

				requirements as specified in Annex A Statement of Work and the presentation of material demonstrates a far superior capability in this area.
Lacks complete or almost complete understanding of the requirements.	Has some understanding of the requirements but lacks adequate understanding in some areas of the requirements.	Demonstrates a good understanding of the requirements.	Demonstrates a very good understanding of the requirements.	Demonstrates an excellent understanding of the requirements.
Proponent do not possess qualifications and experience	Proponent lacks qualifications and experience	Proponent has an acceptable level of qualifications and experience	Proponent is qualified and experienced	Proponent is highly qualified and experienced
Sample projects not related to this requirement	Sample projects generally not related to this requirement	Sample projects generally related to this requirement	Sample projects directly related to this requirement	Leads in sample projects directly related to this requirement
Extremely poor, insufficient to meet performance requirements	Little capability to meet performance requirements	Acceptable capability, should ensure adequate results	Satisfactory capability, should ensure effective results	Superior capability, should ensure very effective results

ANNEX "D" to PART 5 OF THE BID SOLICITATION

FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY – CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit Employment and Social Development Canada (ESDC) – Labour's website.

Date:_____(YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

( ) A1. The Bidder certifies having no work force in Canada.

( ) A2. The Bidder certifies being a public sector employer.

( ) A3. The Bidder certifies being a federally regulated employer being subject to the *Employment Equity Act*.

( ) A4. The Bidder certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

( ) A5.1. The Bidder certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) in place with ESDC-Labour.

OR

( ) A5.2. The Bidder certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

( ) B1. The Bidder is not a Joint Venture.

OR

( ) B2. The Bidder is a Joint venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

ANNEX "E"

INSURANCE REQUIREMENTS

1. Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than **$10,000,000** per accident or occurrence and in the annual aggregate.

2. The Commercial General Liability policy must include the following:

   a. Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.

   b. Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.

   c. Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.

   d. Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.

   e. Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.

   f. Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.

   g. Employees and, if applicable, Volunteers must be included as Additional Insured.

   h. Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)

   i. Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.

   j. Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.

   k. If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.

   l. Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.

2. Automobile Liability Insurance

1. The Contractor must obtain Automobile Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than **$10,000,000** per accident or occurrence.

2. The policy must include the following:

    a. Third Party Liability - $2,000,000 Minimum Limit per Accident or Occurrence
    b. Accident Benefits - all jurisdictional statutes
    c. Uninsured Motorist Protection
    d. Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of cancellation.

3. All Risk Property Insurance

The Contractor must obtain All Risks Property insurance while the Government Property is under its care, custody or control, and maintain it in force throughout the duration of the Contract, in an amount of not less than **$100,000.00.** The Government's Property must be insured on a Replacement Cost (new) basis.

1. Administration of Claims: The Contractor must notify Canada promptly about any losses or damages to Government Property and monitor, investigate and document losses of or damage to ensure that claims are properly made and paid.

2. The All Risks Property insurance policy must include the following:

    a. Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority at least thirty (30) days written notice of policy cancellation.
    b. Loss Payee: Canada as its interest may appear or as it may direct.
    c. Waiver of Subrogation Rights: Contractor's Insurer to waive all rights of subrogation against Canada as represented by the Department of National Defence and Public Works and Government Services Canada for any and all loss of or damage to the property however caused.

ANNEX “F”

SECURITY REQUIREMENTS CHECKLIST

Attached as pdf

ANNEX “G”

DND 626 TASK AUTHORIZATION FORM

Attached as pdf

Government of Canada / Gouvernement du Canada

DEC 0 2 2015

Contract Number / Numéro du contrat
W4295-15C022
Security Classification / Classification de sécurité

SECURITY REQUIREMENTS CHECK LIST (SRCL)
LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine: Department of National Defence

2. Branch or Directorate / Direction générale ou Direction: Regional CAdet Support Unit (Northwest)

3. a) Subcontract Number / Numéro du contrat de sous-traitance

3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant

4. Brief Description of Work / Brève description du travail
To provide instruction and supervision - Cadet Leadership and Challenge course (CLCC)

5. a) Will the supplier require access to Controlled Goods? / Le fournisseur aura-t-il accès à des marchandises contrôlées? — ☑ No / Non ☐ Yes / Oui

5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? / Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques? — ☑ No / Non ☐ Yes / Oui

6. Indicate the type of access required / Indiquer le type d'accès requis

6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? / Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) / (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c) — ☑ No / Non ☐ Yes / Oui

6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. / Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé. — ☐ No / Non ☑ Yes / Oui

6. c) Is this a commercial courier or delivery requirement with no overnight storage? / S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit? — ☑ No / Non ☐ Yes / Oui

7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès

Canada ☐	NATO / OTAN ☐	Foreign / Étranger ☐
7. b) Release restrictions / Restrictions relatives à la diffusion		
No release restrictions / Aucune restriction relative à la diffusion ☐	All NATO countries / Tous les pays de l'OTAN ☐	No release restrictions / Aucune restriction relative à la diffusion ☐
Not releasable / À ne pas diffuser ☐		
Restricted to: / Limité à : ☐	Restricted to: / Limité à : ☐	Restricted to: / Limité à : ☐
Specify country(ies): / Préciser le(s) pays :	Specify country(ies): / Préciser le(s) pays :	Specify country(ies): / Préciser le(s) pays :

7. c) Level of information / Niveau d'information

PROTECTED A / PROTÉGÉ A ☐	NATO UNCLASSIFIED / NATO NON CLASSIFIÉ ☐	PROTECTED A / PROTÉGÉ A ☐
PROTECTED B / PROTÉGÉ B ☐	NATO RESTRICTED / NATO DIFFUSION RESTREINTE ☐	PROTECTED B / PROTÉGÉ B ☐
PROTECTED C / PROTÉGÉ C ☐	NATO CONFIDENTIAL / NATO CONFIDENTIEL ☐	PROTECTED C / PROTÉGÉ C ☐
CONFIDENTIAL / CONFIDENTIEL ☐	NATO SECRET / NATO SECRET ☐	CONFIDENTIAL / CONFIDENTIEL ☐
SECRET / SECRET ☐	COSMIC TOP SECRET / COSMIC TRÈS SECRET ☐	SECRET / SECRET ☐
TOP SECRET / TRÈS SECRET ☐		TOP SECRET / TRÈS SECRET ☐
TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) ☐		TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) ☐

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PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets? ☑ No / Non ☐ Yes / Oui
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS?
If Yes, indicate the level of sensitivity:
Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets? ☑ No / Non ☐ Yes / Oui
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate?

Short Title(s) of material / Titre(s) abrégé(s) du matériel :
Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

☑ RELIABILITY STATUS / COTE DE FIABILITÉ	☐ CONFIDENTIAL / CONFIDENTIEL	☐ SECRET / SECRET	☐ TOP SECRET / TRÈS SECRET
☐ TOP SECRET– SIGINT / TRÈS SECRET – SIGINT	☐ NATO CONFIDENTIAL / NATO CONFIDENTIEL	☐ NATO SECRET / NATO SECRET	☐ COSMIC TOP SECRET / COSMIC TRÈS SECRET
☐ SITE ACCESS / ACCÈS AUX EMPLACEMENTS			

Special comments:
Commentaires spéciaux : _____

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.
REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work? ☑ No / Non ☐ Yes / Oui
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail?
If Yes, will unscreened personnel be escorted? ☐ No / Non ☐ Yes / Oui
Dans l'affirmative, le personnel en question sera-t-il escorté?

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises? ☑ No / Non ☐ Yes / Oui
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS?

11. b) Will the supplier be required to safeguard COMSEC information or assets? ☑ No / Non ☐ Yes / Oui
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC?

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises? ☑ No / Non ☐ Yes / Oui
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ?

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data? ☑ No / Non ☐ Yes / Oui
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS?

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency? ☑ No / Non ☐ Yes / Oui
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale?

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PART C - (continued) / PARTIE C - (suite)

For users completing the form **manually** use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.
Les utilisateurs qui remplissent le formulaire **manuellement** doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form **online** (via the Internet), the summary chart is automatically populated by your responses to previous questions.
Dans le cas des utilisateurs qui remplissent le formulaire **en ligne** (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category Catégorie	PROTECTED PROTÉGÉ			CLASSIFIED CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL CONFIDENTIEL	SECRET	TOP SECRET TRÈS SECRET	NATO RESTRICTED NATO DIFFUSION RESTREINTE	NATO CONFIDENTIAL NATO CONFIDENTIEL	NATO SECRET	COSMIC TOP SECRET COSMIC TRÈS SECRET	PROTECTED PROTÉGÉ A	PROTECTED PROTÉGÉ B	PROTECTED PROTÉGÉ C	CONFIDENTIAL CONFIDENTIEL	SECRET	TOP SECRET TRÈS SECRET
Information / Assets Renseignements / Biens																
Production																
IT Media / Support TI																
IT Link / Lien électronique																

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?
La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

☑ No / Non ☐ Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".
Dans l'affirmative, classifier le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?
La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

☑ No / Non ☐ Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).
Dans l'affirmative, classifier le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquer qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).

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Contract Number / Numéro du contrat
W4265-15C022
Security Classification / Classification de sécurité

PART D - AUTHORIZATION / PARTIE D - AUTORISATION

13. Organization Project Authority / Chargé de projet de l'organisme

Name (print) - Nom (en lettres moulées)	Title - Titre	Signature
K.D. Cressman	Supply Officer	

Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date
204-833-2500 6461	204-833-2612	kenneth.cressman@forces.gc.ca	2015-11-25

14. Organization Security Authority / Responsable de la sécurité de l'organisme

Name (print) - Nom (en lettres moulées)	Title - Titre	Signature
Sasa Medjovic	DDSO - Industrial Security Senior Security Analyst	

Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date
Tel: 613-996-0786		E-mail: sasa.medjovic@forces.gc.ca	2015-Dec 2

15. Are there additional instructions (e.g. Security Guide, Security Classification Guide) attached?
Des instructions supplémentaires (p. ex. Guide de sécurité, Guide de classification de la sécurité) sont-elles jointes?

☐ No / Non ☑ Yes / Oui

16. Procurement Officer / Agent d'approvisionnement

Name (print) - Nom (en lettres moulées)	Title - Titre	Signature

Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date

17. Contracting Security Authority / Autorité contractante en matière de sécurité

Name (print) - Nom (en lettres moulées)	Title - Titre	Signature
Vanessa Good-Davidson Agente à la Sécurité des contrats | Contract Security Officer Secteur de la Sécurité industrielle, TPSGC | Industrial Security Sector, PWGSC Vanessa.Good-Davidson@pwgsc-tpsgc.gc.ca Téléphone : (613) 941-0441		

E-mail address - Adresse courriel	Date
	Dec. 10, 2015

TBS/SCT 350-103(2004/12)

Security Classification / Classification de sécurité

Canada

National Defence / Défense nationale

TASK AUTHORIZATION
AUTORISATION DES TÂCHES

All invoices/progress claims must show the reference Contract and Task numbers. Toutes les factures doivent indiquer les numéros du contrat et de la tâche.	Contract no. – N° du contrat Task no. – N° de la tâche

Amendment no. – N° de la modification	Increase/Decrease – Augmentation/Réduction	Previous value – Valeur précédente

To – À

Delivery location – Expédiez à

Delivery/Completion date – Date de livraison/d'achèvement

TO THE CONTRACTOR

You are requested to supply the following services in accordance with the terms of the above reference contract. Only services included in the contract shall be supplied against this task.

Please advise the undersigned if the completion date cannot be met. Invoices/progress claims shall be prepared in accordance with the instructions set out in the contract.

À L'ENTREPRENEUR

Vous êtes prié de fournir les services suivants en conformité des termes du contrat mentionné ci-dessus. Seuls les services mentionnés dans le contrat doivent être fournis à l'appui de cette demande.

Prière d'aviser le signataire si la livraison ne peut se faire dans les délais prescrits. Les factures doivent être établies selon les instructions énoncées dans le contrat.

Date

for the Department of National Defence
pour le ministère de la Défense nationale

Contract item no. N° d'article du contrat	Services	Cost Prix
	GST/HST TPS/TVH	
	Total	

APPLICABLE ONLY TO PWGSC CONTRACTS: The Contract Authority signature is required when the total value of the DND 626 exceeds the threshold specified in the contract.

NE S'APPLIQUE QU'AUX CONTRATS DE TPSGC : La signature de l'autorité contractante est requise lorsque la valeur totale du formulaire DND 626 est supérieure au seuil précisé dans le contrat.

for the Department of Public Works and Government Services
pour le ministère des Travaux publics et services gouvernementaux

Design: Forms Management 993-4050
Conception : Gestion des formulaires 993-4052

Instructions for completing DND 626 - Task Authorization

Contract no.
Enter the PWGSC contract number in full.

Task no.
Enter the sequential Task number.

Amendment no.
Enter the amendment number.when the original Task is amended to change the scope or the value.

Increase/Decrease
Enter the increase or decrease total dollar amount including taxes.

Previous value
Enter the previous total dollar amount including taxes.

To
Name of the contractor.

Delivery location
Location where the work will be completed, if other than the contractor's location.

Delivery/Completion date
Completion date for the task.

for the Department of National Defence
Signature of the DND person who has delegated **Authority** for signing DND 626 (level of authority based on the dollar value of the task and the equivalent signing authority in the PAM 1.4). **Note:** the person signing in this block ensures that the work is within the scope of the contract, that sufficient funds remain in the contract to cover this task and that the task is affordable within the Project/Unit budget.

Services
Define the requirement briefly (attach the SOW) and identify the cost of the task using the contractor's quote on the level of effort. The Task must use the basis of payment stipulated in the contract. If there are several basis of payment then list here the one(s) that will apply to the task quote (e.g. milestone payments; per diem rates/labour category hourly rates; travel and living rates; firm price/ceiling price, etc.). All the terms and conditions of the contract apply to this Task Authorization and cannot be ignored or amended for this task. Therefore it is not necessary to restate these general contract terms and conditions on the DND 626 Task form.

Cost
The cost of the Task broken out into the individual costed items in **Services**.

GST/HST
The GST/HST cost as appropriate.

Total
The total cost of the task. The contractor may not exceed this amount without the approval of DND indicated on an amended DND 626. The amendment value may not exceed 50% (or the percentage for amendments established in the contract) of the original value of the task authorization. The total cost of a DND 626, including all amendments, may not exceed the funding limit identified in the contract.

Applicable only to PWGSC contracts
This block only applies to those Task Authorization contracts awarded by PWGSC. The contract will include a specified threshold for DND sole approval of the DND 626 and a percentage for DND to approve amendments to the original DND 626. Tasks that will exceed these thresholds must be passed to the PWGSC Contracting Authority for review and signature prior to authorizing the contractor to begin work.

Note:
Work on the task may not commence prior to the date this form is signed by the DA Authority - for tasks within the DND threshold; and by both DND and PWGSC for those tasks over the DND threshold.

Instructions pour compléter le formulaire DND 626 - Autorisation des tâches

N° du contrat
Inscrivez le numéro du contrat de TPSGC en entier.

N° de la tâche
Inscrivez le numéro de tâche séquentiel.

N° de la modification
Inscrivez le numéro de modification lorsque la tâche originale est modifiée pour en changer la portée.

Augmentation/Réduction
Inscrivez le montant total de l'augmentation ou de la diminution, y compris les taxes.

Valeur précédente
Inscrivez le montant total précédent, y compris les taxes.

À
Nom de l'entrepreneur.

Expédiez à
Endroit où le travail sera effectué, si celui-ci diffère du lieu d'affaires de l'entrepreneur.

Date de livraison/d'achèvement
Date d'achèvement de la tâche.

pour le ministère de la Défense nationale
Signature du représentant du MDN auquel on a délégué le **pouvoir d'approbation** en ce qui a trait à la signature du formulaire DND 626 (niveau d'autorité basé sur la valeur de la tâche et le signataire autorisé équivalent mentionné dans le MAA 1.4). **Nota :** la personne qui signe cette attache de signature confirme que les travaux respectent la portée du contrat, que suffisamment de fonds sont prévus au contrat pour couvrir cette tâche et que le budget alloué à l'unité ou pour le projet le permet.

Services
Définissez brièvement le besoin (joignez l'ET) et établissez le coût de la tâche à l'aide de la soumission de l'entrepreneur selon le niveau de difficulté de celle-ci. Les modalités de paiement stipulées dans le contrat s'appliquent à la tâche. Si plusieurs d'entre elles sont prévues, énumérez ici celle/celles qui s'appliquera/ront à la soumission pour la tâche à accomplir (p.ex. acompte fondé sur les étapes franchies; taux quotidien ou taux horaire établi selon la catégorie de main-d'œuvre; frais de déplacement et de séjour; prix fixe ou prix plafond; etc.). Toutes les modalités du contrat s'appliquent à cette autorisation de tâche et ne peuvent être négligées ou modifiées quant à la tâche en question. Il n'est donc pas nécessaire de répéter ces modalités générales afférentes au contrat sur le formulaire DND 626.

Prix
Mentionnez le coût de la tâche en le répartissant selon les frais afférents à chaque item mentionné dans la rubrique **Services**.

TPS/TVH
Mentionnez le montant de la TPS/TVH, s'il y lieu.

Total
Mentionnez le coût total de la tâche. L'entrepreneur ne peut dépasser ce montant sans l'approbation du MDN, formulaire DND 626 modifié à l'appui. Le coût de la modification ne peut pas être supérieur à 50 p. 100 du montant initial prévu dans l'autorisation de tâche (ou au pourcentage prévu dans le contrat pour les modifications). Le coût total spécifié dans le formulaire DND 626, y compris toutes les modifications, ne peut dépasser le plafond de financement mentionné dans le contrat.

Ne s'applique qu'aux contrats de TPSGC
Le présent paragraphe s'applique uniquement aux autorisations de tâche accordées par TPSGC. On inscrira dans le formulaire DND 626 un plafond précis qui ne pourra être approuvé que par le MDN et un pourcentage selon lequel le MDN pourra approuver des modifications au formulaire DND 626 original. Les tâches dont le coût dépasse ces plafonds doivent être soumises à l'autorité contractante de TPSGC pour examen et signature avant qu'on autorise l'entrepreneur à débuter les travaux.

Nota :
Les travaux ne peuvent commencer avant la date de signature de ce formulaire par le responsable du MDN, pour les tâches dont le coût est inférieur au plafond établi par le MDN, et par le MDN et TPSGC pour les tâches dont le coût dépasse le plafond établi par le MDN.

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A-CR-CCP-717/PG-001

ROYAL CANADIAN ARMY CADETS

LEADERSHIP AND CHALLENGE QUALIFICATION STANDARD AND PLAN

(ENGLISH)

Cette publication est disponible en français sous le numéro A-CR-CCP-717/PG-002.

Issued on Authority of the Chief of the Defence Staff

Canada

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OPI: D Cdts 3 – Senior Staff Officer Youth Programs Development **2010-12-01**

Canada

LIST OF EFFECTIVE PAGES

Insert latest changed pages and dispose of superseded pages in accordance with applicable orders.

NOTE

The portion of the text affected by the latest change is indicated by a black vertical line in the margin of the page. Changes to illustrations are indicated by miniature pointing hands or black vertical lines.

Dates of issue for original and changed pages are:

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Contact Officer: D Cdts 3-2-5 – Army Cadet Program Development Staff Officer

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FOREWORD AND PREFACE

1. **Issuing Authority.** This Qualification Standard and Plan (QSP) A-CR-CCP-717/PG-001 was developed under the authority of the Director Cadets and Junior Canadian Rangers (D Cdts & JCR) in accordance with Cadet Administrative and Training Order (CATO) 11-03, *Cadet Program Mandate*, CATO 11-04, *Cadet Program Outline*, and CATO 40-01, *Army Cadet Program Outline*, and is issued on the authority of the Chief of Defence Staff.

2. **Development.** Development of this QSP was in accordance with the performance oriented concept of training outlined in the Canadian Forces Individual Training and Education System A-P9-050 Series, *Manual of Individual Training and Education*, with modifications to meet the needs of the Canadian Cadet Organization (CCO).

3. **Purpose of the QSP.** The QSP is to be used by Cadet Summer Training Centres (CSTCs) to conduct Leadership and Challenge qualification courses, as outlined in CATO 40-01, *Army Cadet Program Outline*.

4. **Suggested Changes.** Suggested changes to this document shall be forwarded through the normal chain of command to National Defence Headquarters (NDHQ) Attention: Army Cadet Program Development Staff Officer (D Cdts 3-2-5) or by e-mail to arm.dev@cadets.gc.ca. Suggested changes shall be in tabular format with three columns to capture; the page number, the paragraph / sub-paragraph number and suggested text amendment.

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CHAPTER 1

GENERAL

AIMS

1. The aim of the Cadet Program (CP) is to develop in youth the attributes of good citizenship and leadership, promote physical fitness, and stimulate the interest of youth in the sea, land and air activities of the Canadian Forces (CF).

2. The aim of the training resulting from this Qualification Standard and Plan (QSP) is to develop, through the use of unique advanced adventure training leadership and challenge development activities, a self-aware outdoor leader with the skills and subject matter knowledge required to act as an activity leader at a Cadet Corps, Expedition Centre or Cadet Summer Training Centre (CSTC).

PROGRAM MISSION AND PARTICIPANT OUTCOMES

3. The mission of the CP is to contribute to the development and preparation of youth for the transition from adolescence to adulthood, enabling cadets to meet the challenges of modern society, through a dynamic, community-based program.

4. CP participant outcomes are the benefits for the cadet during and / or after their involvement with the program that relate to knowledge, skills, attitudes, values, behaviour, condition, and status. The five outcomes of the CP are:

a. emotional and physical well-being;

b. social competence;

c. cognitive competence;

d. proactive citizenship; and

e. understanding the CF.

5. The program mission and participant outcomes are explained in greater detail in CATO 11-03, *Cadet Program Mandate*.

OUTLINE OF TRAINING

6. The CSTC Program provides training that is integral to the CP and focuses on giving a set portion of the cadet population instruction and opportunities to develop advanced knowledge and skills in specialized activities and to develop instructors / leaders for these activities. Additionally, it provides these cadets further opportunities to develop, practice, and employ the general knowledge and skills obtained through the Corps Program.

7. **Description of Need.** Cadet corps require training opportunities that reinforce and supplement the training conducted during the Corps Program. Based on the training resulting from this QSP, the cadet will achieve the Leadership and Challenge (L & C) qualification, developing outdoor adventure training specialist skills in mountain biking, canoeing or kayaking, hiking, glacier travel, and climbing as well as developing skills in self-assessment to refine their outdoor leadership capabilities.

8. Each CSTC qualification requires completion of a series of performance objectives (POs) and associated enabling objectives (EOs).

PROGRAM DESIGN

9. Training associated with the L & C qualification has been designed:

a. assuming that the cadet attending is between 15 and 16 years of age;

b. assuming that the cadet is qualified Gold Star;

c. assuming that the cadet has previously completed summer training;

d. using age-appropriate learning strategies;

e. using a typical training day consisting of eight 40-minute periods conducted during the daytime with the evening dedicated to extracurricular activities and free time;

f. using a week that typically begins on Monday and ends the following Sunday consisting of a maximum of six training days and a minimum of one day dedicated to extracurricular activities and free time;

g. including training which is experiential and skills-based, with a lesser focus on theoretical knowledge; and

h. assuming that learning will take place through a combination of programmed periods of instruction, unstructured discussions, teachable moments, coaching / mentoring opportunities and structured reflection.

COURSE COMPONENTS

10. **Mandatory Training.** Mandatory training consists of those activities outlined in this QSP that CSTCs are required to conduct. These activities are comprised of the following two sub-components:

a. **Standard Components.** Standard components are periods allocated to provide the basic administrative structure required to conduct a CSTC qualification course. These components are described in more detail in Chapter 2 of this QSP.

b. **Specialty Training.** Specialty training are those periods allocated in support of a specific qualification aim and described in the requisite POs.

11. **Extracurricular Activities.** Extracurricular activities are active and passive opportunities offered to the cadet daily from the end of formal training to lights-out and during “Sunday routine”. Ancillary in nature, extracurricular activities add value to the CSTC experience by enhancing what is learned during the day, offering fun recreational opportunities that encourage socialization, and allowing the cadet to pursue personal interests. Specific direction regarding extracurricular activities can be found in CATO 11-04, *Cadet Program Outline*.

PERFORMANCE OBJECTIVES

12. L & C builds upon the skills and knowledge acquired during the Basic Expedition qualification and Expedition Instructor qualification. The following are the POs that form the content of the L & C qualification:

a. **Citizenship**. PO S402 – Participate in a Community Service Activity

(1) The aim of this PO is for the cadets to participate in a one day community service activity within the CSTC training area. Activities will primarily focus on building / repairing trails, building bridges / boardwalks, creating and erecting trail markers, clearing brush, landscaping, promoting park events, assisting with wildlife prevention measures, or restoring natural habitats.

(2) This PO provides a direct benefit to a national / provincial park or a training area associated with the CSTC. It also promotes the importance of environmental stewardship and demonstrates the importance of the individual's responsibility to sustain the environment.

b. **Leadership**. PO S403 – Lead a Team During an Outdoor Adventure Activity

(1) The aim of this PO is to build upon leadership skills developed from previous CSTC and corps programs. Provides cadets the opportunity to lead a team while participating in challenging outdoor adventure activities.

(2) This PO supports leadership training by improving upon team leadership through practical experience. Leadership training contributes directly to the achievement of the program aim of developing in youth the attributes of good leadership and the participant outcomes of emotional and physical well-being, social competence and cognitive competence.

c. **First Aid**. PO S410 – Attain Wilderness First Aid Qualification

(1) The aim of basic wilderness first aid is to provide the cadet the ability to stabilize a causality in remote areas overnight or until they can receive medical attention.

(2) Wilderness first aid contributes to the achievement of the program aim of developing the attributes of good citizenship and the participant outcome of proactive citizenship by providing the cadet with the ability to actively assist other citizens in a time of physical distress.

d. **Trekking**. PO S423 – Alpine Trek on Class 3 Terrain

(1) The aim of this PO is to improve upon trekking skills developed from previous CSTC and corps programs. This will allow the cadet to participate in alpine trekking on class 3 terrain and provide adequate experience-based subject knowledge to allow the cadet to develop other cadets' skills while back at the corps.

(2) Alpine trekking supports Army Cadet expeditions through the development of trekking as a mode of travel in support of expedition activities. Army Cadet expeditions develop leadership skills, while enhancing individual self-concepts, such as self-confidence, self-reliance, self-esteem, and self-discipline.

e. **Outdoor Leadership.** PO S423 – Reflect on the Competencies of an Outdoor Leader

(1) The aim of this PO is to further develop senior level cadets through physical and mental challenges while placing them in the position of an Outdoor Leader (OL). The training is intended to enhance what was previously taught during the Corps Program and CSTC Program with the development of new skills or building upon old ones. Six competencies of an OL will be used to expand training and provide a better understanding of the responsibilities of being a team leader.

(2) This PO supports leadership training by improving upon team leadership though practical experience. Leadership training contribute directly to the achievement of the program aim of developing in youth the attributes of good leadership and the participant outcomes of emotional and physical well-being, social competence and cognitive competence.

f. **Mountain Bike**. PO S452 Ride a Mountain Bike on Intermediate Trails

(1) The aim of this PO is to develop / improve upon skills to allow the cadet to participate in mountain biking on intermediate trails and to provide adequate experience-based subject knowledge provided by qualified guides.

(2) Mountain biking supports Army Cadet expeditions through the development of mountain biking as a mode of travel in support of expedition activities. Army Cadet expeditions develop leadership skills, while enhancing individual self-concepts, such as self-confidence, self-reliance, self-esteem, and self-discipline.

g. **Canoe.** PO S423A Manoeuvre a Canoe on Moving Water

(1) The aim of this PO is to develop skills and techniques allowing the cadet to progress from flat water to moving water and to provide adequate experienced-based subject knowledge provided by qualified guides.

(2) Canoeing supports Army Cadet expeditions through the development of canoeing as a mode of travel in support of expedition activities. Army Cadet expeditions develop leadership skills, while enhancing individual self-concepts, such as self-confidence, self-reliance, self-esteem, and self-discipline.

h. **Kayak.** PO S423B Manoeuvre a Kayak on Moving Water

(1) The aim of this PO is to develop skills and techniques allowing the cadet to progress from flat water to moving water and to provide adequate experienced-based subject knowledge provided by qualified guides.

(2) Kayaking supports Army Cadet expeditions through the development of kayaking as a mode of travel in support of expedition activities. Army Cadet expeditions develop leadership skills, while enhancing individual self-concepts, such as self-confidence, self-reliance, self-esteem, and self-discipline.

i. **Rock Climbing**. PO S454 Climb a Natural Rock Face

(1) The aim of this PO is to develop the techniques allowing a cadet to climb a natural rock face and to provide adequate experience-based subject knowledge provided by qualified guides.

(2) Rock climbing contributes directly to the program aim of developing leadership and the participant outcomes of emotional and physical well-being and social competence. This is achieved through the development of positive self-esteem through promotion of a high level of competence in select skills.

j. **Mountaineering**. PO S455 Mountaineer on a Glacier

(1) The aim of this PO is to develop the techniques allowing a cadet to mountaineer on a glacier and provide adequate experience-based subject knowledge provided by qualified guides.

(2) Mountaineering supports Army Cadet expeditions through the development of mountaineering as a mode of travel in support of expedition activities. Army Cadet expeditions develop leadership skills, while enhancing individual self-concepts, such as self-confidence, self-reliance, self-esteem, and self-discipline.

k. **Horseback Riding**. PO S456 Ride a Horse on Established Trails

(1) The aim of this PO is to develop the techniques to allow a cadet to ride a horse on established trails and provide adequate experience-based subject knowledge provided by qualified guides.

(2) Horseback riding supports Army Cadet expeditions through the development of horseback riding as a mode of travel in support of expedition activities. Army Cadet expeditions develop leadership skills, while enhancing individual self-concepts, such as self-confidence, self-reliance, self-esteem, and self-discipline.

METHOD OF ACHIEVING OBJECTIVES

13. The majority of L & C POs are skills-related. Skills are acquired through practical periods of instruction and practice. In order to achieve the POs, a hands-on learning approach is essential. The following guidance may assist in the implementation of training:

a. Some theory is required for safety purposes and for introducing new material. However, most material can be taught using hands-on practical methods.

b. Ensure training is well organized and planned in advance to allow instructors adequate time to prepare for the delivery / conduct of training. This includes reviewing lesson specifications and instructional guides and creating instructional materials as required.

c. Schedule training that ensures a smooth flow from one activity to the next.

d. Take adequate time for the cadet to be debriefed and reflect on experiential training activities, to include future applications of the experience.

TRAINING PREREQUISITES

14. To participate in the L & C course, a youth must be a member of a cadet corps, as specified in A-CR-CCP-950/PT-001, *Queen's Regulations and Orders for the Canadian Cadet Organization*, Article 4.01 and be eligible to attend CSTC training as outlined in A-CR-CCP-950/PT-001, Article 5.03 and in accordance with CATO 40-01, *Army Cadet Program Outline*.

15. Cadets shall be required to meet physical fitness standards as outlined in CATO 40-01, *Army Cadet Program Outline*.

USE OF THE QSP

16. This QSP shall be used as the primary authority governing the development, implementation, conduct, and evaluation of the training and standards to qualify a cadet as L & C. This QSP shall also be used by D Cdts & JCR as the primary reference for validation of L & C qualification training.

17. L & C qualification training shall be conducted using this QSP as the training control document in conjunction with A-CR-CCP-717/PF-001, *Royal Canadian Army Cadets Leadership and Challenge Instructional Guides*.

18. Any deviation from the requirements detailed in this publication due to training limitations must be approved by D Cdts 3, Senior Staff Officer Youth Programs Development, NDHQ.

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CHAPTER 2

TRAINING MANAGEMENT DETAILS

RESPONSIBLE AGENCY AND TRAINING ESTABLISHMENTS

1. The Managing Authority for the Leadership and Challenge (L & C) qualification is D Cdts & JCR. The conduct of training is the responsibility of the Regional Cadet Support Units (RCSUs) through authorized CSTCs.

TRAINING DETAILS

2. In accordance with CATO 11-04, *Cadet Program Outline* and CATO 40-01, *Army Cadet Program Outline*, the L & C course is conducted over a 6-week period consisting of 35 training days.

3. **Standard Components.** Standard components are activities that form part of all CSTC courses. These activities take place during the training day but are normally not directly related to POs or achieving the qualification. The standard component activities are:

a. **In Routine.** Four periods scheduled at the beginning of the course for administrative in routine. While most administrative matters may have been dealt with prior to the first training day, these periods have been allocated to allow for scheduling flexibility at the beginning of a course. In the case of L & C course, two of these periods shall be scheduled for the completion of a team Full Value Contract.

b. **Briefings.** Two periods allocated to a combination of introductory briefings, such as:

(1) CO briefing,

(2) Department briefing,

(3) Fire and Safety briefing,

(4) MIR briefing, etc.

c. **Platoon Commander (Pl Comd) Periods.** Three periods provided to the Pl Comd to do such things as team bonding and / or building activities, debriefings, reflecting, or to address any issues related to quality of life.

d. **Life Skills.** Two periods for moral and / or spiritual instruction.

e. **Recreational Sports / Swim.** Eight periods.

f. **CO's Discretion.** Two periods to be scheduled at the CO's discretion. The intent of these periods is to provide the opportunity for the cadet to participate in such things as:

(1) special ceremonies.

(2) additional CF familiarization activities, or

(3) local community events.

g. **Spare Periods.** Three periods to be used at the discretion of the Course Officer (Crse O) allowing flexibility to account for things such as weather or availability of facilities.

h. **Weekly Parade.** Two periods per week (not including the last week) for a CSTC-level parade. In the case of L & C, weekly parade may be held in the evening on the first day of each cycle. These periods do not count towards the standard component.

i. **Course Administration.** Six periods for routine matters. Course administration could consist of activities, such as:

(1) initial cadet interviews,

(2) Platoon Senior briefings,

(3) cadet banking,

(4) supply,

(5) course critiques, and

(6) course reports / final cadet interviews.

j. **Graduation Parade Practice.** Two periods to be scheduled, in the last week, for rehearsal of the graduation parade.

k. **Graduation Parade.** Two periods to carry out a graduation parade.

l. **Out Routine.** Four periods to be scheduled at the end of the course for administrative out routine. While most administrative matters are usually dealt with after the last training day, these periods have been allocated to allow for scheduling flexibility at the end of a course.

4. **Period Allocation.** There are a total of eight 40-minute periods allocated each day based on a 6-day training week. A detailed period allocation of specialty training is located at Chapter 2, Annex A. Total period allocation by PO is as follows:

STANDARD COMPONENTS	No. Pd
In / out routine	8
Briefings	2
Pl Comd periods	3
Life skills	2
Recreational sports / swim	8
CO's discretion	2
Spare periods	3
Weekly parade	0
Course administration	6
Graduation parade practice	2
Graduation parade	2
Total	**38**

SPECIALTY TRAINING			
Topic	**PO No.**	**Performance Objective**	**No. Pd**
Community Service	S402	Participate in a Community Service Activity	8
Leadership	S403	Lead a Team During an Outdoor Adventure Activity	1
First Aid	S410	Attain Wilderness First Aid Qualification	16
Trekking	S423	Alpine Trek on Class 3 Terrain	38
Outdoor Leadership	S425	Apply the Competencies of an Outdoor Leader	11
Mountain Biking	S452	Ride a Mountain Bike on Intermediate Trails	31
Canoeing / Kayaking	S453A / B	Manoeuvre a Canoe / Kayak on Moving Water	38
Rock Climbing	S454	Climb a Natural Rock Face	38

SPECIALTY TRAINING			
Topic	**PO No.**	**Performance Objective**	**No. Pd**
Mountaineering	S455	Mountaineer on a Glacier	39
Horseback Riding	S456	Ride a Horse on Established Trails	22
		Total	**242**
		Total Standard Components and Specialty Training	**280**

5. **Scheduling.** When planning training, the lesson specifications found in Chapter 4 shall be consulted for detailed information. While a sample schedule is located at Chapter 2, Annex B, it does not account for the many variables CSTCs face when developing course schedules. Some of the things the training staff should consider when developing the course schedule include, but are not limited to:

a. the training environment required for each activity;

b. the availability of technical specialists to conduct the activity, if required;

c. the availability of shared facilities and the requirements of other courses that use those facilities; and

d. the availability of shared equipment and the requirements of other courses that use that equipment.

TRAINING CAPACITY

6. This training has been designed for platoons ranging from 24 to 30 cadets.

TRAINING STAFF REQUIREMENTS

7. The training staff is directly involved in the delivery of training and supervision of cadets during the designated training day. The training staff structure is primarily comprised of positions from both the standard company organizational structure and instructional or training support cadre(s). The following reflects the minimum requirements for training staff, but does not reflect the additional support and supervisory staff (eg, administration, supply, logistics, barracks supervision, extracurricular activities, etc.) at the CSTC.

a. Course Officer / Company 2IC (Crse O):

RANK	MOS ID	NUMBER	QUALIFICATION
Captain	00232-02	1	Minimum: Captain Qualification, or Intermediate Officer Training Course. Preferred: Senior Instructor Training Course; and / or CIC Training Officer Course.
Note: The Crse O shall normally be responsible for three platoons and should have previous service in the L & C course.			

b. Platoon Commander (Pl Comd):

RANK	MOS ID	NUMBER	QUALIFICATION
Lt / Capt	00232-02	1 per platoon	Minimum: Lieutenant Qualification; or Land Environmental Training Course. Preferred: Abseil Instructor, Mountain Bike Instructor, and/or Canoe Trip Leader.

c. Assistant Platoon Commander (Asst/Pl Comd):

RANK	MOS ID	NUMBER	QUALIFICATION
2Lt / Lt	00232-02	1 per platoon	Minimum: Basic Officers Training Course; or Land Environmental Training Course. Preferred: Abseil Instructor, Mountain Bike Instructor, and/or Basic Canoe Qualification.

d. Staff Cadet:

RANK	MOS ID	NUMBER	QUALIFICATION
Staff Cadet Warrant Officer	N/A	1 per platoon	Minimum: National Star Certification (NSCE) or equivalent. Preferred: Master Cadet Qualification, Leadership and Challenge, Enhanced proficiency in outdoor adventure activities.
Note: Staff Cadet Warrant Officers shall have passed the NSCE or be Master Cadet.			

e. Staff cadet positions may be organized in different manners based on the requirements of the CSTC. This flexibility allows the CSTC to balance instruction and supervision of cadets between the platoon staff and instructional or training support cadre(s). If one or two staff cadet positions are designated as platoon staff, the remaining staff resources should be used to offset instructional or training support cadre(s) requirements. One staff cadet position per platoon shall be designated as Platoon Warrant Officer (Pl WO).

8. **Technical Specialists.** Hard skills training as outlined in the performance objectives of the L & C qualification require contracted technical specialists with highly developed skills and suitable qualifications. Cadet Instructor Cadre (CIC) Military Occupational Structure Specialist Specifications do not always meet the minimum requirement for L & C technical specialists. The number of technical specialists required is influenced by policy documentation specific to the activity (eg, CATOs, Water Safety Orders, Adventure Training Safety Standards, etc.), Parks Canada policies and by local CSTC circumstances, as is the structure for instructional or training support cadre(s). The technical specialists required to support L & C are outlined in detail at Chapter 2, Annex C.

RESOURCE REQUIREMENTS

9. RCSU COs are responsible for ensuring that required equipment and supplies are available. A detailed list of material, audiovisual equipment, and training / learning aids required to conduct the training is located at Chapter 2, Annex D.

TRAINING ADMINISTRATION

10. **Cadet Evaluation.** Details on cadet evaluation are found in Chapter 3.

11. **Records and Reports.** Training staff shall maintain records and reports as required in accordance with Chapter 3. Upon completion of training, a copy of the Leadership and Challenge Qualification Record (Chapter 3, Annex C) shall be returned to the cadet corps to be recorded on the cadet's DND 2399, *Cadet Personnel Record*.

QUALIFICATION

12. The Leadership and Challenge qualification and associated badge are awarded to the cadet for successful completion of the associated training standards in accordance with Chapter 3.

RELATED DOCUMENTS

13. This QSP is to be used in conjunction with:

    a. CATOs,

    b. A-CR-CCP-717/PF-001, *Royal Canadian Army Cadets, Leadership and Challenge, Instructional Guides*,

    c. A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, and

    d. A-CR-CCP-030/PT-001, *Water Safety Orders*.

REFERENCES

14. A list of references used in this QSP is located at Chapter 2, Annex E.

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ANNEX A

LEADERSHIP AND CHALLENGE SUMMARY AND TIME ALLOCATION

PO	Performance Objective	EO	Enabling Objective	No. of Pd	Delivery Personnel
S402	**Participate in a Community Service Activity**	N/A	Participate in a Community Service Activity	8	Pl Comd
			Total S402	**8**	
S403	**Lead a Team During an Outdoor Adventure Activity**	S403.01	Describe the Duties of a Team Leader During an Outdoor Adventure Activity	1	Pl Comd
		S403 PC		0	Pl Comd
			Total S403	**1**	
S410	**Attain Wilderness First Aid Qualification**	N/A	Attain Wilderness First Aid Qualification	16	FA Instructor
		S410 PC		0	FA Instructor
			Total S410	**16**	
S423	**Alpine Trek on Class 3 Terrain**	S423.01	Prepare for Alpine Trekking	3	Contractor
		S423.02	Review Navigation	2	Contractor
		S423.03	Perform Trekking Skills	33	Contractor
		S423 PC		0	Contractor
			Total S423	**38**	
S425	**Apply the Competencies of an Outdoor Leader**	S425.01	Review the Competencies of an Outdoor Leader	1	Pl Staff
		S425.02	Develop Goals for Outdoor Adventure Activities	2	Pl Staff
		S425.03	Document Experiences on an Outdoor Adventure Training Activity	2	Pl Staff
		S425.04	Apply Conflict Management	1	Pl Staff
		S425.05	Apply Program Management	1	Pl Staff
		S425.06	Apply Decision Making and Judgment	1	Pl Staff
		S425.07	Apply Self Awareness	1	Pl Staff
		S425.08	Apply Environmental Stewardship	1	Pl Staff
		S425.09	Apply Facilitation	1	Pl Staff
		S425 PC		0	Pl Staff
			Total S425	**11**	
S452	**Ride a Mountain Bike on Intermediate Trails**	S452.01	Prepare for Mountain Biking	2	Contractor
		S452.02	Repair a Mountain Bike	3	Contractor
		S452.03	Perform Mountain Biking Skills on Novice Trails	6	Contractor
		S452.04	Perform Mountain Biking Skills on Intermediate Trails	20	Contractor
		S452 PC		0	Contractor
			Total S452	**31**	

PO	Performance Objective	EO	Enabling Objective	No. of Pd	Delivery Personnel
S453A	**Manoeuvre a Canoe on Moving Water**	S453A.01	Prepare for Canoeing	2	Contractor
		S453A.02	Paddle a Canoe on Flatwater	9	Contractor
		S453A.03	Paddle a Canoe on Moving Water	27	Contractor
		S453A PC		0	Contractor
			Total S453A	**38**	
S453B	**Manoeuvre a Kayak on Moving Water**	S453B.01	Prepare for Kayaking	2	Contractor
		S453B.02	Paddle a Kayak on Flatwater	9	Contractor
		S453B.03	Paddle a Kayak on Moving Water	27	Contractor
		S453B PC		0	Contractor
			Total S453B	**38**	
S454	**Climb a Natural Rock Face**	S454.01	Prepare to Rock Climb	2	Contractor
		S454.02	Perform Rock Climbing Skills While Bouldering	3	Contractor
		S454.03	Climb a Natural Rock Face	16	Contractor
		S454.04	Perform a Multi-Pitch Climb	17	Contractor
		S454 PC		0	Contractor
			Total S454	**38**	
S455	**Mountaineer on a Glacier**	S455.01	Prepare for Glacier Travel	4	Contractor
		S455.02	Perform Mountaineering Skills	3	Contractor
		S455.03	Mountaineer on a Glacier	32	Contractor
		S455 PO		0	Contractor
			Total S455	**39**	
S456	**Ride a Horse on Established Trails**	S456.01	Prepare for Horseback Riding	2	Contractor
		S456.02	Perform Horse Care Duties	4	Contractor
		S456.03	Ride a Horse on Established Trails	16	Contractor
		S456 PC		0	Contractor
			Total S456	**22**	
			Total Specialty Training	**242**	
			Total Standard Components	**38**	
			Total Periods	**280**	

ANNEX A, APPENDIX 1

Attain Wilderness First Aid Qualification and Ride a Horse on Established Trails

This annex is intended as amplification to Chapter 4 to provide guidance to the conduct of PO S410 (Attain Wilderness First Aid Qualification) and PO S456 (Ride a Horse on Established Trails).

Pre-Training

Many cadets will have participated in first aid training either at the corps or at the CSTC. Standard first aid has been scheduled in many third year summer training courses. Wilderness First Aid (WFA) is a tangible skill that the cadets will be able to use while on the Leadership and Challenge (L & C) course and when they return to their home corps.

Horseback riding will be a new activity for many of the cadets attending the L & C course as it is not in the Corps Program.

Course Objective

The training conducted during the L & C course is designed to further develop senior cadets through physical and mental challenges while placing them in the position of an Outdoor Leader (OL). The training is intended to enhance what has been previously taught during the Corps and CSTC Programs, with the development of new skills / building upon old ones.

Each cadet is given the opportunity to be a team leader, for a day, of their group. During this time, they are assessed on hard skills and soft leadership skills. If the cadet is not the leader for a particular day, they are required to reflect upon the choices and decisions that they would have made as the team leader, using journaling and group discussion.

Cycle Synopsis

This cycle will be conducted over five days consisting of two days of Wilderness First Aid and three days of Horseback riding. Cadets will be divided into groups based upon instructor-to-cadet ratios.

a. **Days One to Three.** Consist of two days of horseback riding training with an overnight component carrying over into the third day. Instructors will be responsible for developing higher level skills through an experiential learning approach while employing teachable moments

b. **Days Four and Five.** Consists of WFA training; 16 hours conducted over two days with an outdoor component.

Cycle Assessment

Within the QSP there are assessment tools. Using a rubric / checklist, guides will provide assessment on the cadets' technical skills. Platoon staff will complete assessment for learning and assessment of learning on the cadets during leadership assignments. Cadets will have the opportunity to see the leadership assignment modelled by one of the platoon staff members. They will have the opportunity to complete at least one (two if required) assessment for learning (practice) during the first two (or third as required) cycles. The final or formal assessment of learning occurs during the last four cycles (or three as required), preferably during an overnight component.

Due to the nature of some of the cycles, it will be common to have the entire platoon together for the overnight component, while during the day they are separated into four groups. When this happens, each group will have their own designated team leader. When the groups reconvene for the overnight component, the leaders will be responsible for their own group.

Journals and Logbooks

Each cadet will be given a journal at the beginning of the summer and will be expected to make entries on their experiences, challenges and achievements throughout each cycle. During each cycle, several cadets will each be the team leader of their group for the day. As each cycle is paired with a competency of an OL, it is the responsibility of the OL (cadet team leader) to help to facilitate integration of this competency with the OAA. Journal entries will be used during the platoon debriefing at the conclusion of the activity to discuss:

- incidents where the OL applied the competency that led to a positive experience for participants;
- incidents where the OL could have applied the competency to create a more positive experience for participants; and
- how an OL could apply the competency to outdoor adventure training activities.

The logbooks will be issued prior to the start of the first cycle. They will be used to record and document all factual data during an OAA. This data includes:

- who,
- what,
- when, and
- where.

The logbook can be used to track the progress and detail improvements demonstrated through a variety of OAAs. This documentation may be used to bypass repetitive training once prior knowledge has been demonstrated. Each logbook will be signed off by the respective guide for that skill.

“So You Want to be a riding guide”

During the evenings of the overnight component, the guiding staff will sit down with the cadets and explain to the group why they made the decision to become a guide for their particular skill. Also, they will explain the steps that were involved and the challenges / obstacles that they had to overcome. This can be done in training groups or, if the platoon is together for the evening, as a whole with each guide taking a turn describing their story.

Competency of an Outdoor Leader – Facilitation

Facilitation is the process of moving a group or individual toward a desired outcome. A facilitator provides the means for making experiences possible. For an OL, facilitation is a skill that fosters productive group dynamics, enabling all members to work toward completing the OAA in a safe and enjoyable manner, while also developing interpersonal relationships.

Horseback riding is a new activity to many of the cadets. An OL might find themselves dealing with individuals that are uninterested in riding or scared because they feel that the activity is unsafe. With WFA, individuals might feel like the scenarios are too difficult or they are unwilling to participate causing a disruption in learning for the group. As an OL, in both scenarios, facilitating the experience can make it more enjoyable for all participants.

As the cycle progresses others competencies of an OL will have been observed. It is up to the adult staff member to help identify and explain the impact of these competencies during the OAA.

Teachable Moments

When following an experiential education approach, being aware of teachable moments is very important. A teachable moment is a situation that naturally arises during the course of the day and provides opportunity for discussion. These moments reinforce program material and should be taken advantage of throughout the cycle. Guiding staff should take the time to explain and emphasize program material as opportunities arise. Some of these teachable moments could include, but are not limited to:

- navigation,
- leave no trace,
- foot care,
- basic astronomy,
- wildlife,
- predicting weather,
- campsite routine, and
- use of equipment.

Sample Schedule

A schedule has been included to provide a sample format to follow for the cycle. The CSTC may choose to adjust this schedule to reflect the choice of activities, time, facilities and available resources.

Sample Schedule: PO S410 (Attain Wilderness First Aid [WFA] Qualification) and PO S456 (Ride a Horse on Established Trails)

Cycle Day 1		
Timings	**Task / Activity**	**Remarks**
0800	Depart for training area	Cadets arrive with all personal clothing and equipment required for days activities.
0900	Arrive at training area	Guides and staff introductions. Briefing : activities, expectations, safety, timings, dress, meals, rules, etc.
0920	Classes	S425.09 (Examine Facilitation).
1000	Classes	S456.01 (Prepare for Horseback Riding).
1120	Classes	S456.02 (Perform Horse Care Duties).
1200	Lunch	Bag lunches.
1300	Classes	S456.02 (Perform Horse Care Duties).
1500	Classes	S456.03 (Ride a Horse on Established Trails).
1600	Depart training area	
1700	Arrive at CSTC	
1730	Supper	Mess Hall.
1830	Evening activity	Final packing of all clothing and equipment required for overnight.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
Cycle Day 2		
Timings	**Task / Activity**	**Remarks**
0800	Depart CSTC Area	Cadets load equipment / gear onto vans.
0900	Arrive at training area	
0930	Classes	S456.03 (Ride a Horse on Established Trails).
1200	Lunch	Bag lunches.
1300	Trail ride	S456.03 (Ride a Horse on Established Trails).
1630	Arrive at campsite	Overnight kit and tents have to arrive before cadets. Team leaders are in charge of setting up camp site.
1730	Supper	Hay boxes.
1830	Evening activity	Games, challenges, discussions, etc. Cadets perform their horse care duties.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader assigned	
Cycle Day 3		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	Pick up bag lunches. Load overnight equipment into cube van.
0800	Trail ride	S456.03 (Ride a Horse on Established Trails).
1200-1300	Lunch	Bag lunches.
1500	Arrive at end point	Perform horse care duties.
1600	Depart for CSTC	

1700	Arrive at CSTC	Cadets unload gear from cube van. Separate personal and group equipment.
1730	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Platoon debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 4		
Timings	**Task / Activity**	**Remarks**
0800	Classes	S410 (Attain a WFA Qualification).
1200	Lunch	Mess Hall.
1300	Classes	S410 (Attain a WFA Qualification).
1700	Supper	Mess Hall.
1800	Classes	S410 (Attain a WFA Qualification).
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 5		
Timings	**Task / Activity**	**Remarks**
0800	Classes	S410 (Attain a WFA Qualification).
1200	Lunch	Mess Hall.
1300	Classes	S410 (Attain a WFA Qualification).
1700	Supper	Mess Hall.
1800	Classes	S410 (Attain a WFA Qualification).
1930	Platoon debriefing	Led by adult staff. Cadets are required to bring their journals.

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ANNEX A, APPENDIX 2

Alpine Trek on Class 3 Terrain

This annex is intended as amplification to Chapter 4 to provide guidance to the conduct of PO S423 (Alpine Trek on Class 3 Terrain).

Pre-training

Trekking is one of the primary modes of travel used throughout the Corps and CSTC Programs. Before arriving on the Leadership and Challenge (L & C) course many cadets will have participated in trekking on Class 3 terrain as part of the Cadet Program.

Course Objective

The training conducted during the L & C course is designed to further develop senior cadets through physical and mental challenges while placing them in the position of an Outdoor Leader (OL). The training is intended to enhance what has been previously taught during the Corps and CSTC Programs, with the development of new skills / building upon old ones.

Each cadet is given the opportunity to be a team leader, for a day, of their group. During this time, they are assessed on hard skills and soft leadership skills. If the cadet is not the leader for a particular day, they are required to reflect upon the choices and decisions that they would have made as the team leader, using journaling and group discussion.

Cycle Synopsis

This cycle will be conducted over five days of increasing intensity and duration. Each cadet will be placed into one of four groups, based upon language, gender and fitness level. A minimum of one guide staff will be assigned as the team instructor for the duration of the cycle.

a. **Day One.** Consists of preparation for alpine trekking and a review of navigation and general trekking skills.

b. **Days Two to Five.** Tailored to developing higher level skills through an experiential learning approach while employing teachable moments. It includes an overnight component.

Cycle Assessment

Within the QSP there are assessment tools. Using a rubric / checklist, guides will provide assessment on the cadets' technical skills. Platoon staff will complete assessment for learning and assessment of learning on the cadets during leadership assignments. Cadets will have the opportunity to see the leadership assignment modelled by one of the platoon staff members. They will have the opportunity to complete at least one (two if required) assessment for learning (practice) during the first two (or third as required) cycles. The final or formal assessment of learning occurs during the last four cycles (or three as required), preferably during an overnight component.

Due to the nature of some of the cycles, it will be common to have the entire platoon together for the overnight component, while during the day they are separated into four groups. When this happens, each group will have their own designated team leader. When the groups reconvene for the overnight component, the leaders will be responsible for their own group.

Journals and Logbooks

Each cadet will be given a journal at the beginning of the summer and will be expected to make entries on their experiences, challenges and achievements throughout each cycle. During each cycle, several cadets will each be the team leader of their group for the day. As each cycle is paired with a competency of an OL, it is the responsibility of the OL (cadet team leader) to help to facilitate integration of this competency with the OAA. Journal entries will be used during the platoon debriefing at the conclusion of the activity to discuss:

- incidents where the OL applied the competency that led to a positive experience for participants;
- incidents where the OL could have applied the competency to create a more positive experience for participants; and
- how an OL could apply the competency to outdoor adventure training activities.

The logbooks will be issued prior to the start of the first cycle. They will be used to record and document all factual data during an OAA. This data includes:

- who,
- what,
- when, and
- where.

The logbook can be used to track the progress and detail improvements demonstrated through a variety of OAAs. This documentation may be used to bypass repetitive training once prior knowledge has been demonstrated. Each logbook will be signed off by the respective guide for that skill.

"So You Want to be an Alpine Guide"

During the evenings of the overnight component, the guiding staff will sit down with the cadets and explain to the group why they made the decision to become a guide for their particular skill. Also, they will explain the steps that were involved and the challenges / obstacles that they had to overcome. This can be done in training groups or, if the platoon is together for the evening, as a whole with each guide taking a turn describing their story.

Competency of an Outdoor Leader – Conflict Management

Conflicts during OAAs are inevitable. The challenge for the OL is to stop the conflict before it escalates, or deal with it as quickly and effectively as possible. Most conflicts that occur in outdoor situations are a result of:

- weather conditions;
- varying levels of experience among team members;
- the challenging nature of the activity; and
- personalities of team members.

An OL who is able to communicate clearly with all team members will be better suited to manage conflict. There are always going to be situations where the OL is required to interact with difficult people. A team member who was a pleasure to have around at the beginning of the alpine trekking cycle, may have blisters from ill-fitting boots and be arguing with everyone by Day Four. It becomes the responsibility of the OL to deal with situations like this.

As the cycle progresses others competencies of an OL will have been observed. It is up to the adult staff member to help identify and explain the impact of these competencies during the OAA.

Teachable Moments

When following an experiential education approach, being aware of teachable moments is very important. A teachable moment is a situation that naturally arises during the course of the day and provides opportunity for discussion. These moments reinforce program material and should be taken advantage of throughout the cycle. Guiding staff should take the time to explain and emphasize program material as opportunities arise. Some of these teachable moments could include, but are not limited to:

- navigation,
- leave no trace,
- foot care,
- basic astronomy,
- wildlife,
- predicting weather,
- campsite routine, and
- use of equipment.

Sample Schedule

A schedule has been included to provide a sample format to follow for the cycle. The CSTC may choose to adjust this schedule to reflect the choice of activities, time, facilities and available resources.

Sample Schedule: PO S423 (Alpine Trek on Class 3 Terrain)

Cycle Day 1		
Timings	**Task / Activity**	**Remarks**
0800	Introduction / Briefing	Guides and staff introductions. Briefing : activities, expectations, safety, timings, dress, meals, rules, etc.
0830	Class	S425.04 (Examine Conflict Management). Cadets arrive with all personal clothing and equipment required for alpine trekking.
0910	Classes	S423.01 (Prepare for Alpine Trekking).
1200	Lunch	Mess hall.
1300	Classes	S423.02 (Review Navigation).
1420	Classes	S423.03 (Perform Trekking Skills).
1720	Supper	Mess hall.
1830	Evening activity	Final packing of all clothing and equipment.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
Cycle Day 2		
Timings	**Task / Activity**	**Remarks**
0800	Depart CSTC area	Cadets load equipment / gear onto buses.
0930	Arrive at training area	Cadets prepare for alpine trekking.
1000	Alpine trekking	S423.03 (Perform Trekking Skills).
1200	Lunch	Bag Lunches.
1300	Alpine trekking	S423.03 (Perfom Trekking Skills).
1700	Arrive at campsite	Team leader organizes set up of campsite.
1730	Supper	IMPs.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader assigned	
Cycle Day 3		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	IMPs.
0800	Alpine trekking	S423.03 (Perform Trekking Skills).
1200	Lunch	Snack bags.
1300	Alpine trekking	S423.03 (Perform Trekking Skills).
1700	Arrive at campsite	Team leader organizes set up of campsite.
1720	Supper	IMPs.
1830	Evening activity	Discussion with guides.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	

Cycle Day 4		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	IMPs.
0800	Alpine trekking	S423.03 (Perform Trekking Skills).
1200-1300	Lunch	Snack bags.
1700	Arrive at campsite	Team leader organizes set up of campsite.
1720	Supper	IMPs.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 5		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	IMPs
0800	Alpine trekking	S423.03 (Perform Trekking Skills).
1200-1300	Lunch	Bag Lunch.
1300	Depart for CSTC	Cadets load equipment / gear onto buses.
1500	Arrive at CSTC	Cadets unload personal gear from buses.
1500	Cleaning / drying	Cadets separate personal / issued gear.
1700	Supper	Mess hall.
1830	Evening activity	Kit return.
1930	Platoon debriefing	Led by adult staff. Cadets are required to bring their journals.

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ANNEX A, APPENDIX 3

Ride a Mountain Bike on Intermediate Trails

This annex is intended as amplification to Chapter 4 to provide guidance to the conduct of PO S452 (Ride a Mountain Bike on Intermediate Trails).

Pre-training

Army Cadet mountain bike training is one of the primary modes of travel employed while at the expedition training centre and CSTC Program. Before arriving on the Leadership and Challenge (L & C) course, many cadets will have participated in mountain bike training as part of the Cadet Program.

Course Objective

The training conducted during the L & C course is designed to further develop senior cadets through physical and mental challenges while placing them in the position of an Outdoor Leader (OL). The training is intended to enhance what has been previously taught during the Corps and CSTC Programs, with the development of new skills / building upon old ones.

Each cadet is given the opportunity to be a team leader, for a day, of their group. During this time, they are assessed on hard skills and soft leadership skills. If the cadet is not the leader for a particular day, they are required to reflect upon the choices and decisions that they would have made as the team leader, using journaling and group discussion.

Cycle Synopsis

This cycle will be conducted over four days of increasing intensity and duration. Each cadet will be placed into one of four groups based on experience level and desired challenge. One of the guide staff are assigned as the group instructor for the duration of the cycle:

a. **Day One**. Consists of developing basic biking and bike maintenance skills.

b. **Day Two**. Focuses on developing skills learned during day one through a day trip and teachable moments.

c. **Days Three and Four**. Tailored to developing higher level skills through an experiential learning approach. It includes an overnight component.

Cycle Assessment

Within the QSP there are assessment tools. Using a rubric / checklist, guides will provide assessment on the cadets' technical skills. Platoon staff will complete assessment for learning and assessment of learning on the cadets during leadership assignments. Cadets will have the opportunity to see the leadership assignment modelled by one of the platoon staff members. They will have the opportunity to complete at least one (two if required) assessment for learning (practice) during the first two (or third as required) cycles. The final or formal assessment of learning occurs during the last four cycles (or three as required), preferably during an overnight component.

Due to the nature of some of the cycles, it will be common to have the entire platoon together for the overnight component, while during the day they are separated into four groups. When this happens, each group will have their own designated team leader. When the groups reconvene for the overnight component, the leaders will be responsible for their own group.

Journals and Logbooks

Each cadet will be given a journal at the beginning of the summer and will be expected to make entries on their experiences, challenges and achievements throughout each cycle. During each cycle, several cadets will each be the team leader of their group for the day. As each cycle is paired with a competency of an OL, it is the responsibility of the OL (cadet team leader) to help to facilitate integration of this competency with the OAA. Journal entries will be used during the platoon debriefing at the conclusion of the activity to discuss:

- incidents where the OL applied the competency that led to a positive experience for participants;
- incidents where the OL could have applied the competency to create a more positive experience for participants; and
- how an OL could apply the competency to outdoor adventure training activities.

The logbooks will be issued prior to the start of the first cycle. They will be used to record and document all factual data during an OAA. This data includes:

- who,
- what,
- when, and
- where.

The logbook can be used to track the progress and detail improvements demonstrated through a variety of OAAs. This documentation may be used to bypass repetitive training once prior knowledge has been demonstrated. Each logbook will be signed off by the respective guide for that skill.

"So You Want to be a Mountain Bike Guide"

During the evenings of the overnight component, the guiding staff will sit down with the cadets. During this time the guide will explain to the group why they made the decision to become a guide for their particular skill. Also, they will explain the steps that were involved and the challenges / obstacles that they had to overcome. This can be done within training groups or, if the platoon is together for the evening, as a whole with each guide taking a turn describing their story.

Competency of an Outdoor Leader – Program Management

For the mountain biking cycle, program management was chosen as the focus competency of an OL. It was chosen because mountain biking primarily focuses on the OL's ability to employ skills for safety and risk management. OAAs are characterized by the inherent risk they possess. Risk, or the perception of risk, is one of the critical components that make outdoor programming so popular and successful. OLs must be able to balance risk and safety—primarily focusing on the perception of risk. Too much risk, or the perception of risk, can make an activity very stressful and create an unpleasant experience for the participants.

Due to the risk of injuries during the mountain bike cycle, the ability to assess the activity for risk, manage risk during the activity and develop a contingency plan are important skills of an OL. What level of trail to ride, whether to walk / ride the bike down a steep hill or to change the order of bikers are some of the decisions that the OL must consider during the mountain bike cycle.

As the cycle progresses others competencies of an OL will have been observed. It is up to the adult staff member to help identify and explain the impact of these competencies during the OAA.

Teachable Moments

When following an experiential education approach, being aware of teachable moments is very important. A teachable moment is a situation that naturally arises during the course of the day and provides opportunity for discussion. These moments reinforce program material and should be taken advantage of throughout the cycle. Guiding staff should take the time to explain and emphasize program material as opportunities arise. Some of these teachable moments could include, but are not limited to:

- navigation,
- leave no trace,
- foot care,
- basic astronomy,
- wildlife,
- predicting weather,
- campsite routine, and
- use of equipment.

Sample Schedule

A schedule has been included to provide a sample format to follow for the cycle. The CSTC may choose to adjust this schedule to reflect the choice of activities, time, facilities and available resources.

Sample Schedule: PO S452 (Ride a Mountain Bike on Intermediate Trails)

Cycle Day 1		
Timings	**Task / Activity**	**Remarks**
0800	Introductions / Briefing	Guides and staff introductions. Briefing : activities, expectations, safety, timings, dress, meals, rules, etc.
0840	Class	S425.05 (Examine Program Management).
0920	Class	S452.01 (Prepare for Mountain Biking).
1000	Break	
1015	Bike / equipment issue	Divide cadets into groups.
1040	Class	S452.01 (Prepare for Mountain Biking).
1120	Class	S452.02 (Repair a Mountain Bike). Cadets will be within their training groups.
1230-1330	Lunch	
1330	Classes	S452.02 (Repair a Mountain Bike). Cadets will be within their training groups.
1450	Break	
1500	Classes	S452.03 (Perform Mountain Biking Skills on Novice Trails).
1630	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
Cycle Day 2		
Timings	**Task / Activity**	**Remarks**
0800	Small group games, obstacle courses, etc.	S452.03 (Perform Mountain Biking Skills on Novice Trails).
1200	Lunch	Bag lunches.
1300	Trail ride	S452.03 (Perform Mountain Biking Skills on Intermediate Trails). Pre-planned trails around the camp.
1600	Clean up / bike return	Cadets load equipment / gear onto vans.
1630	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader assigned	
Cycle Day 3		
Timings	**Task / Activity**	**Remarks**
0800	Depart CSTC	
0930	Arrive at training area	Cadets unload bikes from cube van.
1000	Day ride	S452.03 (Perform Mountain Biking Skills on Intermediate Trails). Cadets will be with their training group.
1200–1300	Lunch	Bag lunch on the trail.
1500	Depart training area	

1600	Arrive at campsite	Overnight kit and tents should be scheduled to arrive before cadets. Team leaders will be in charge of setting up the campsite.
1700	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 4		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	Pick up bag lunches. Load overnight equipment onto cube van.
0800	Day ride	S452.03 (Perform Mountain Biking Skills on Intermediate Trails).
1200–1300	Lunch	On the trail.
1500	Arrive at end point	
1530	Load bikes	
1600	Depart for CSTC	
1730	Arrive at CSTC	
1730	Supper	Separate personal and group equipment.
1830	Evening activity	Bike clean up / Equipment return
1930	Platoon debriefing	Led by adult staff. Cadets are required to bring their journals.

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ANNEX A, APPENDIX 4

Manoeuvre a Canoe on Moving Water

This annex is intended as amplification to Chapter 4 to provide guidance to the conduct of PO S453A (Manoeuvre a Canoe on Moving Water).

Pre-training

Canoeing is one of the primary modes of travel used throughout the Corps Program and CSTC Program. Before arriving on the L & C course, many cadets will have participated in moving water or flat water canoe training as part of the Cadet Program.

Course Objective

The training conducted during the L & C course is designed to further develop senior cadets through physical and mental challenges while placing them in the position of an Outdoor Leader (OL). The training is intended to enhance what has been previously taught during the Corps and CSTC Programs, with the development of new skills / building upon old ones.

Each cadet is given the opportunity to be a team leader, for a day, of their group. During this time, they are assessed on hard skills and soft leadership skills. If the cadet is not the leader for a particular day, they are required to reflect upon the choices and decisions that they would have made as the team leader, using journaling and group discussion.

Cycle Synopsis

This cycle will be conducted over five days consisting of both flat and moving water training. Each cadet will be placed into one of four groups based on the cadet's preferred language. A minimum of one guide staff will be assigned as the group instructor for the duration of the cycle.

a. **Day One.** Consists of developing basic skills and emergency drills.

b. **Day Two**. Half of Day Two is dedicated to confirming skills taught during Day One through mini games, on lake tripping, or obstacle courses. The remainder of Day Two consists of developing moving water skills, focusing on manoeuvres and emergency drills.

c. **Days Three–Five**. Tailored to developing higher level skills through an experiential learning approach while employing teachable moments. It includes an overnight component.

Cycle Assessment

Within the QSP there are assessment tools. Using a rubric / checklist, guides will provide assessment on the cadets' technical skills. Platoon staff will complete assessment for learning and assessment of learning on the cadets during leadership assignments. Cadets will have the opportunity to see the leadership assignment modelled by one of the platoon staff members. They will have the opportunity to complete at least one (two if required) assessment for learning (practice) during the first two (or third as required) cycles. The final or formal assessment of learning occurs during the last four cycles (or three as required), preferably during an overnight component.

Due to the nature of some of the cycles, it will be common to have the entire platoon together for the overnight component, while during the day they are separated into four groups. When this happens, each group will have their own designated team leader. When the groups reconvene for the overnight component, the leaders will be responsible for their own group.

Journals and Logbooks

Each cadet will be given a journal at the beginning of the summer and will be expected to make entries on their experiences, challenges and achievements throughout each cycle. During each cycle, several cadets will each be the team leader of their group for the day. As each cycle is paired with a competency of an OL, it is the responsibility of the OL (cadet team leader) to help to facilitate integration of this competency with the OAA. Journal entries will be used during the platoon debriefing at the conclusion of the activity to discuss:

- incidents where the OL applied the competency that led to a positive experience for participants;
- incidents where the OL could have applied the competency to create a more positive experience for participants; and
- how an OL could apply the competency to outdoor adventure training activities.

The logbooks will be issued prior to the start of the first cycle. They will be used to record and document all factual data during an OAA. This data includes:

- who,
- what,
- when, and
- where.

The logbook can be used to track the progress and detail improvements demonstrated through a variety of OAAs. This documentation may be used to bypass repetitive training once prior knowledge has been demonstrated. Each logbook will be signed off by the respective guide for that skill.

“So You Want to be a Canoeing Guide”

During the evenings of the overnight component, the guiding staff will sit down with the cadets and explain to the group why they made the decision to become a guide for their particular skill. Also, they will explain the steps that were involved and the challenges / obstacles that they had to overcome. This can be done in training groups or, if the platoon is together for the evening, as a whole with each guide taking a turn describing their story.

Competency of an Outdoor Leader – Decision Making and Judgement

Decision making is the process of selecting a course of action among several possible ones. Once an OL has considered their options and reached a decision, they should stick with it unless circumstances change. They should not allow themselves to be swayed by other group members. In OAA, where safety is always a concern, the OL must have confidence in the decisions they make and the group must have confidence in the decisions the OL makes.

During the canoe cycle, the OL is placed in the front of the group. It is expected that they will be confident in making decisions that affect the safety and welfare of the group. While scouting rapids, it is their final decision that determines which path to take and where to place the down stream safety. Being able to communicate with group members and use their experiences and ideas to help make a decision is an integral part of making a decision.

As the cycle progresses others competencies of an OL will have been observed. It is up to the adult staff member to help identify and explain the impact of these competencies during the OAA.

Teachable Moments

When following an experiential education approach, being aware of teachable moments is very important. A teachable moment is a situation that naturally arises during the course of the day and provides opportunity for discussion. These moments reinforce program material and should be taken advantage of throughout the cycle. Guiding staff should take the time to explain and emphasize program material as opportunities arise. Some of these teachable moments could include, but are not limited to:

- navigation,
- leave no trace,
- foot care,
- basic astronomy,
- wildlife,
- predicting weather,
- campsite routine, and
- use of equipment.

Sample Schedule

A schedule has been included to provide a sample format to follow for the cycle. The CSTC may choose to adjust this schedule to reflect the choice of activities, time, facilities and available resources.

Sample Schedule: PO S453A (Manoeuvre a Canoe on Moving Water)

Cycle Day 1		
Timings	**Task / Activity**	**Remarks**
0800	Depart CSTC area	Cadets load equipment / gear onto vans.
0840	Arrive at training area	Guides and staff introductions. Briefing : activities, expectations, safety, timings, dress, meals, rules, etc.
0940	Class	S425.06 (Examine Decision Making and Judgment).
1020	Classes	S453.01A (Prepare for Canoeing). Divide the cadets into groups.
1140	Classes	Cadets are in training groups. S453.02A (Paddle a Canoe on Flat Water).
1220	Lunch	Bag Lunches.
1300	Classes	Cadets will be within their training groups S453.02A (Paddle a Canoe on Flat Water).
1540	Depart training area	Cadets load equipment / gear onto vans.
1640	Arrive at CSTC	Cadets unload personal gear.
1700	Supper	Mess hall.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
Cycle Day 2		
Timings	**Task / Activity**	**Remarks**
0800	Depart CSTC area	Cadets load equipment / gear onto vans.
0900	Arrive at training area	Cadets unload canoes and don equipment.
0930	Classes	Cadets are in training groups S453.02A (Paddle a Canoe on Flat Water).
1200	Lunch	Bag Lunches.
1300	Classes	Cadets are in training groups S453.03A (Paddle a Canoe on Moving Water).
1540	Depart training area	Cadets load equipment / gear onto vans.
1640	Arrive at CSTC	Cadets unload personal gear.
1700	Supper	Mess Hall.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader assigned	
Cycle Day 3		
Timings	**Task / Activity**	**Remarks**
0800	Depart CSTC	
0900	Arrive at training area	Cadets unload canoes and don equipment.
0930	Day paddle	Cadets are in training groups. S453.03A (Paddle a Canoe on Moving Water).
1200-1300	Lunch	On the river.
1500	Depart training area	

1600	Arrive at campsite	Overnight kit and tents will have arrived before cadets. Team leaders are in charge of setting up camp site.
1700	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 4		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Organize camp site and pack personal equipment for the day.
0700	Breakfast	Pick up bag lunches.
0800	Day paddle	S453.03A (Paddle a Canoe on Moving Water).
1200-1300	Lunch	On the river.
1500	Depart training area	
1600	Arrive at campsite	
1700	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 5		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	Pick up bag lunches. Load overnight equipment onto cube van.
0800	Day paddle	S453.03A (Paddle a Canoe on Moving Water).
1200-1300	Lunch	On the river.
1500	Arrive at end point	Load equipment / gear onto vans.
1600	Depart for CSTC	
1700	Arrive at CSTC	Cadets unload equipment / gear from vans.
1700	Supper	Separate personal and group equipment.
1930	Platoon debriefing	Led by adult staff. Cadets are required to bring their journals.

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ANNEX A, APPENDIX 5

Manoeuvre a Kayak on Moving Water

This annex is intended as amplification to Chapter 4 to provide guidance to the conduct of PO S453B (Manoeuvre a Kayak on Moving Water).

Pre-training

While kayaking is not one of the primary modes of travel in the Army Cadet Program, many cadets will have participated in moving water or flat water canoe training. Although the vessel used for training is different, some of the strokes, manoeuvres, emergency drills and concepts are similar.

Course Objective

The training conducted during the L & C course is designed to further develop senior cadets through physical and mental challenges while placing them in the position of an Outdoor Leader (OL). The training is intended to enhance what has been previously taught during the Corps and CSTC Programs, with the development of new skills / building upon old ones.

Each cadet is given the opportunity to be a team leader, for a day, of their group. During this time, they are assessed on hard skills and soft leadership skills. If the cadet is not the leader for a particular day, they are required to reflect upon the choices and decisions that they would have made as the team leader, using journaling and group discussion.

Cycle Synopsis

This cycle will be conducted over five days consisting of both flat and moving water training. Each cadet will be placed into one of four groups, based upon the cadet's preferred language. A minimum of one of the guiding staff will be assigned as the group instructor for the duration of the cycle.

a. **Day One.** Consists of developing basic skills and emergency drills.

b. **Day Two**. Half of day two is dedicated to confirming skills taught during Day One through mini games, on lake tripping, or obstacle courses. The remainder of the day consists of developing moving water skills focusing on manoeuvres and emergency drills.

c. **Days Three to Five**. Tailored to developing higher level skills through an experiential learning approach while employing teachable moments. It includes an overnight component.

Cycle Assessment

Within the QSP there are assessment tools. Using a rubric / checklist, guides will provide assessment on the cadets' technical skills. Platoon staff will complete assessment for learning and assessment of learning on the cadets during leadership assignments. Cadets will have the opportunity to see the leadership assignment modelled by one of the platoon staff members. They will have the opportunity to complete at least one (two if required) assessment for learning (practice) during the first two (or third as required) cycles. The final or formal assessment of learning occurs during the last four cycles (or three as required), preferably during an overnight component.

Due to the nature of some of the cycles, it will be common to have the entire platoon together for the overnight component, while during the day they are separated into four groups. When this happens, each group will have their own designated team leader. When the groups reconvene for the overnight component, the leaders will be responsible for their own group.

Journals and Logbooks

Each cadet will be given a journal at the beginning of the summer and will be expected to make entries on their experiences, challenges and achievements throughout each cycle. During each cycle, several cadets will each be the team leader of their group for the day. As each cycle is paired with a competency of an OL, it is the responsibility of the OL (cadet team leader) to help to facilitate integration of this competency with the OAA. Journal entries will be used during the platoon debriefing at the conclusion of the activity to discuss:

- incidents where the OL applied the competency that led to a positive experience for participants;
- incidents where the OL could have applied the competency to create a more positive experience for participants; and
- how an OL could apply the competency to outdoor adventure training activities.

The logbooks will be issued prior to the start of the first cycle. They will be used to record and document all factual data during an OAA. This data includes:

- who,
- what,
- when, and
- where.

The logbook can be used to track the progress and detail improvements demonstrated through a variety of OAAs. This documentation may be used to bypass repetitive training once prior knowledge has been demonstrated. Each logbook will be signed off by the respective guide for that skill.

“So You Want to be a Kayaking Guide”

During the evenings of the overnight component, the guiding staff will sit down with the cadets and explain to the group why they made the decision to become a guide for their particular skill. Also, they will explain the steps that were involved and the challenges / obstacles that they had to overcome. This can be done in training groups or, if the platoon is together for the evening, as a whole with each guide taking a turn describing their story.

Competency of an Outdoor Leader – Decision Making and Judgement

Decision making is the process of selecting a course of action among several possible ones. Once an OL has considered their options and reached a decision, they should stick with it unless circumstances change. They should not allow themselves to be swayed by other group members. In OAA, where safety is always a concern, the OL must have confidence in the decisions they make and the group must have confidence in the decisions the OL makes.

During the kayak cycle, the OL is placed in the front of the group. It is expected that they will be confident in making decisions that affect the safety and welfare of the group. While scouting rapids, it is their final decision that determines which path to take and where to place the downstream safety. Being able to communicate with fellow group members and use their experiences and ideas to help make a decision is an integral part of making a decision.

As the cycle progresses others competencies of an OL will have been observed. It is up to the adult staff member to help identify and explain the impact of these competencies during the OAA.

Teachable Moments

When following an experiential education approach, being aware of teachable moments is very important. A teachable moment is a situation that naturally arises during the course of the day and provides opportunity for discussion. These moments reinforce program material and should be taken advantage of throughout the cycle. Guiding staff should take the time to explain and emphasize program material as opportunities arise. Some of these teachable moments could include, but are not limited to:

- navigation,
- leave no trace,
- foot care,
- basic astronomy,
- wildlife,
- predicting weather,
- campsite routine, and
- use of equipment.

Sample Schedule

A schedule has been included to provide a sample format to follow for the cycle. The CSTC may choose to adjust this schedule to reflect the choice of activities, time, facilities and available resources.

Sample Schedule: PO S453B (Manoeuvre a Kayak on Moving Water)

Cycle Day 1		
Timings	**Task / Activity**	**Remarks**
0800	Depart CSTC area	Cadets load equipment / gear onto vans.
0840	Arrive at training area	Guides and staff introductions. Briefing : activities, expectations, safety, timings, dress, meals, rules, etc.
0940	Class	S425.06 (Examine Decision Making and Judgment).
1020	Classes	S453.01B (Prepare for Kayaking). Divide the cadets into groups.
1140	Classes	Cadets are in training groups. S453.02B (Paddle a Kayak on Flat Water).
1220	Lunch	Bag Lunches.
1300	Classes	Cadets will be within their training groups S453.02B (Paddle a Kayak on Flat Water).
1540	Depart training area	Cadets load equipment / gear onto vans.
1640	Arrive at CSTC	Cadets unload personal gear.
1700	Supper	Mess hall.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
Cycle Day 2		
Timings	**Task / Activity**	**Remarks**
0800	Depart CSTC area	Cadets load equipment / gear onto vans.
0900	Arrive at training area	Cadets unload kayaks and don equipment.
0930	Classes	Cadets are in training groups S453.02B (Paddle a Kayak on Flat Water).
1200	Lunch	Bag Lunches.
1300	Classes	Cadets are in training groups S453.03B (Paddle a Kayak on Moving Water).
1540	Depart training area	Cadets load equipment / gear onto vans.
1640	Arrive at CSTC	Cadets unload personal gear.
1700	Supper	Mess Hall.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader assigned	
Cycle Day 3		
Timings	**Task / Activity**	**Remarks**
0800	Depart CSTC	
0900	Arrive at training area	Cadets unload canoes and don equipment.
0930	Day paddle	Cadets are in training groups. S453.03B (Paddle a Kayak on Moving Water).
1200-1300	Lunch	On the river.
1500	Depart training area	

1600	Arrive at campsite	Overnight kit and tents will have arrived before cadets. Team leaders are in charge of setting up camp site.
1700	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 4		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Organize camp site and pack personal equipment for the day.
0700	Breakfast	Pick up bag lunches.
0800	Day paddle	S453.03B (Paddle a Kayak on Moving Water).
1200-1300	Lunch	On the river.
1500	Depart training area	
1600	Arrive at campsite	
1700	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 5		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	Pick up bag lunches. Load overnight equipment onto cube van.
0800	Day paddle	S453.03B (Paddle a Kayak on Moving Water).
1200-1300	Lunch	On the river.
1500	Arrive at end point	Load equipment / gear onto vans.
1600	Depart for CSTC	
1700	Arrive at CSTC	Cadets unload equipment / gear from vans.
1700	Supper	Separate personal and group equipment.
1930	Platoon debriefing	Led by adult staff. Cadets are required to bring their journals.

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ANNEX A, APPENDIX 6

Climb a Natural Rock Face

This annex is intended as amplification to Chapter 4 to provide guidance to the conduct of PO S454 (Climb a Natural Rock Face).

Pre-training

While rock climbing is not part of the mandatory program of the Army Cadet Program it is often chosen as an activity done during expeditions or sports nights. Many cadets will have participated in abseil training which shares similarities with rock climbing in the areas of knots, hardware, equipment and procedure.

Course Objective

The training conducted during the L & C course is designed to further develop senior cadets through physical and mental challenges while placing them in the position of an Outdoor Leader (OL). The training is intended to enhance what has been previously taught during the Corps and CSTC Programs, with the development of new skills / building upon old ones.

Each cadet is given the opportunity to be a team leader, for a day, of their group. During this time, they are assessed on hard skills and soft leadership skills. If the cadet is not the leader for a particular day, they are required to reflect upon the choices and decisions that they would have made as the team leader, using journaling and group discussion.

Cycle Synopsis

This cycle will be conducted over five days including sport and multi-pitch climbing. Each cadet will be placed into one of four groups based upon the cadet's preferred language. A minimum of two guide staff will be assigned to each group as the instructors for the duration of the cycle.

a. **Days One and Two.** Consist of rock climbing preparation and development of basic skills.

b. **Day Three**. Improving skills developed during Days One and Two while introducing the procedures for a multi-pitch climb.

c. **Days Four and Five**. Tailored to developing higher level skills through an experiential learning approach while participating in single and multi-pitch climbs.

Note: Days Three–Five include of an overnight component.

Cycle Assessment

Within the QSP there are assessment tools. Using a rubric / checklist, guides will provide assessment on the cadets' technical skills. Platoon staff will complete assessment for learning and assessment of learning on the cadets during leadership assignments. Cadets will have the opportunity to see the leadership assignment modelled by one of the platoon staff members. They will have the opportunity to complete at least one (two if required) assessment for learning (practice) during the first two (or third as required) cycles. The final or formal assessment of learning occurs during the last four cycles (or three as required), preferably during an overnight component.

Due to the nature of some of the cycles, it will be common to have the entire platoon together for the overnight component, while during the day they are separated into four groups. When this happens, each group will have their own designated team leader. When the groups reconvene for the overnight component, the leaders will be responsible for their own group.

Journals and Logbooks

Each cadet will be given a journal at the beginning of the summer and will be expected to make entries on their experiences, challenges and achievements throughout each cycle. During each cycle, several cadets will each be the team leader of their group for the day. As each cycle is paired with a competency of an OL, it is the responsibility of the OL (cadet team leader) to help to facilitate integration of this competency with the OAA. Journal entries will be used during the platoon debriefing at the conclusion of the activity to discuss:

- incidents where the OL applied the competency that led to a positive experience for participants;
- incidents where the OL could have applied the competency to create a more positive experience for participants; and
- how an OL could apply the competency to outdoor adventure training activities.

The logbooks will be issued prior to the start of the first cycle. They will be used to record and document all factual data during an OAA. This data includes:

- who,
- what,
- when, and
- where.

The logbook can be used to track the progress and detail improvements demonstrated through a variety of OAAs. This documentation may be used to bypass repetitive training once prior knowledge has been demonstrated. Each logbook will be signed off by the respective guide for that skill.

“So You Want to be a Rock Guide”

During the evenings of the overnight component, the guiding staff will sit down with the cadets and explain to the group why they made the decision to become a guide for their particular skill. Also, they will explain the steps that were involved and the challenges / obstacles that they had to overcome. This can be done in training groups or, if the platoon is together for the evening, as a whole with each guide taking a turn describing their story.

Competency of an Outdoor Leader – Self Awareness

Self-awareness starts with a clear understanding of one’s personal abilities and limitations. Without a clear sense of their own abilities and limitations, OLs will have difficulty setting challenges appropriate to the abilities and limitations of group members. As well, there may be a tendency to set the bar too high which may jeopardize the emotional and physical safety of the members of the group they are leading. This can result in the OL becoming a possible danger to the group and diminishing the quality of the experience for all.

While on the rock climbing cycle, the OL may suggest lanes of varying difficulty for each cadet to climb. Selecting a climb that is too difficult may cause a cadet to loose their confidence when they are unable to reach the top. On the other hand, selecting a climb that is too easy for a cadet may cause them to feel insulted.

As the cycle progresses others competencies of an OL will have been observed. It is up to the adult staff member to help identify and explain the impact of these competencies during the OAA.

Teachable Moments

When following an experiential education approach, being aware of teachable moments is very important. A teachable moment is a situation that naturally arises during the course of the day and provides opportunity for discussion. These moments reinforce program material and should be taken advantage of throughout the cycle. Guiding staff should take the time to explain and emphasize program material as opportunities arise. Some of these teachable moments could include, but are not limited to:

- navigation,
- leave no trace,
- foot care,
- basic astronomy,
- wildlife,
- predicting weather,
- campsite routine, and
- use of equipment.

Sample Schedule

A schedule has been included to provide a sample format to follow for the cycle. The CSTC may choose to adjust this schedule to reflect the choice of activities, time, facilities and available resources.

Sample Schedule: PO S454 (Climb a Natural Rock Face)

Cycle Day 1		
Timings	**Task / Activity**	**Remarks**
0800	Depart training area	Divide the cadets into groups. Cadets load equipment / gear onto vans.
0900	Arrive at training area	Guides and staff introductions. Briefing : activities, expectations, safety, timings, dress, meals, rules, etc.
1000	Class	S425.08 (Examine Self Awareness).
1040	Classes	S454.01 (Prepare to Rock Climb).
1200	Lunch	Bag Lunches.
1240	Classes	Cadets are in their training groups. S454.02 (Perform Rock Climbing Skills While Bouldering).
1400	Break	
1420	Classes	Cadets are in their training groups. S454.03 (Climb a Natural Rock Face).
1540	Prepare to depart	Cadets load equipment / gear onto vans.
1600	Depart training area	
1700	Arrive at CSTC	Cadets unload personal gear.
1720	Supper	Mess Hall.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
Cycle Day 2		
Timings	**Task / Activity**	**Remarks**
0800	Depart training area	Cadets load equipment / gear onto vans.
0900	Arrive at training area	Cadets don climbing equipment.
0930	Classes	Cadets are in their training groups. S454.03 (Climb a Natural Rock Face).
1200	Lunch	Bag lunches.
1240	Classes	Cadets are in their training groups. S454.03 (Climb a Natural Rock Face).
1540	Prepare to depart	Cadets load equipment / gear onto vans.
1600	Depart training area	
1700	Arrive at CSTC	Cadets unload personal gear.
1720	Supper	Mess Hall.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader assigned	
Cycle Day 3		
Timings	**Task / Activity**	**Remarks**
0800	Depart for training area	
0900	Arrive at training area	Cadets don climbing equipment.
0930	Climbing	Cadets are in their training groups. S454.03 (Climb a Natural Rock Face).

1200	Lunch	Bag lunches.
1240	Climbing	Cadets are in their training groups. S454.03 (Climb a Natural Rock Face).
1420	Climbing	S454.04 (Perform a Multi-Pitch Climb).
1540	Prepare to depart	
1600	Depart training area	
1700	Arrive at campsite	Overnight kit and tents have to arrive before cadets. Team leaders are in charge of setting up camp site.
1720	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 4		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Organize camp site and pack personal equipment for the day.
0700	Breakfast	Pick up bag lunches.
0800	Move to training area	
0900	Climbing	S454.04 (Perform a Multi Pitch Climb).
1200	Lunch	Bag lunch.
1300	Climbing	S454.04 (Perform a Multi Pitch Climb).
1600	Depart training area	
1700	Arrive at campsite	
1730	Supper	
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 5		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down campsite / pack equipment.
0700	Breakfast	Pick up bag lunches. Load campsite equipment onto vans.
0800	Move to training area	
0900	Climbing	S454.04 (Perform a Multi-Pitch Climb).
1200	Lunch	Bag Lunch.
1300	Climbing	S454.04 (Perform a Multi-Pitch Climb).
1540	Prepare to depart	Cadets load equipment / gear onto vans.
1600	Depart for CSTC	
1700	Arrive at CSTC	Cadets unload gear from vans.
1700	Supper	Separate personal and group equipment.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Platoon debriefing	Led by adult staff. Cadets are required to bring their journals.

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ANNEX A, APPENDIX 7

Mountaineer on a Glacier

This annex is intended as amplification to Chapter 4 to provide guidance to the conduct of PO S455 (Mountaineer on a Glacier).

Pre-training

While not many cadets will have participated in glacier travel, most will have hiked class 3 alpine terrain which employs and develops similar skills. Knots, rope management and equipment use are also skills that may have been previously taught and will be demonstrated during the glacier cycle. Mountaineering is different from hiking, consisting of technical terrain requiring skills in rope groups, crevasse rescue, and / or avalanche assessment.

Course Objective

The training conducted during the L & C course is designed to further develop senior cadets through physical and mental challenges while placing them in the position of an Outdoor Leader (OL). The training is intended to enhance what has been previously taught during the Corps and CSTC Programs, with the development of new skills / building upon old ones.

Each cadet is given the opportunity to be a team leader, for a day, of their group. During this time, they are assessed on hard skills and soft leadership skills. If the cadet is not the leader for a particular day, they are required to reflect upon the choices and decisions that they would have made as the team leader, using journaling and group discussion.

Cycle Synopsis

This cycle will be conducted over five days of increasing intensity and duration. Each cadet will be placed into one of four groups, based on language, gender and fitness level. A minimum ratio of one guide staff for every three cadets will be maintained for the duration of the cycle.

a. **Day One.** Consists of preparation for glacier travel and practice of general mountaineering skills.

b. **Days Two to Five.** Tailored to developing higher level skills through an experiential learning approach while employing teachable moments. It includes overnight components.

Cycle Assessment

Within the QSP there are assessment tools. Using a rubric / checklist, guides will provide assessment on the cadets' technical skills. Platoon staff will complete assessment for learning and assessment of learning on the cadets during leadership assignments. Cadets will have the opportunity to see the leadership assignment modelled by one of the platoon staff members. They will have the opportunity to complete at least one (two if required) assessment for learning (practice) during the first two (or third as required) cycles. The final or formal assessment of learning occurs during the last four cycles (or three as required), preferably during an overnight component.

Due to the nature of some of the cycles, it will be common to have the entire platoon together for the overnight component, while during the day they are separated into four groups. When this happens, each group will have their own designated team leader. When the groups reconvene for the overnight component, the leaders will be responsible for their own group.

Journals and Logbooks

Each cadet will be given a journal at the beginning of the summer and will be expected to make entries on their experiences, challenges and achievements throughout each cycle. During each cycle, several cadets will each be the team leader of their group for the day. As each cycle is paired with a competency of an OL, it is the responsibility of the OL (cadet team leader) to help to facilitate integration of this competency with the OAA. Journal entries will be used during the platoon debriefing at the conclusion of the activity to discuss:

- incidents where the OL applied the competency that led to a positive experience for participants;
- incidents where the OL could have applied the competency to create a more positive experience for participants; and
- how an OL could apply the competency to outdoor adventure training activities.

The logbooks will be issued prior to the start of the first cycle. They will be used to record and document all factual data during an OAA. This data includes:

- who,
- what,
- when, and
- where.

The logbook can be used to track the progress and detail improvements demonstrated through a variety of OAAs. This documentation may be used to bypass repetitive training once prior knowledge has been demonstrated. Each logbook will be signed off by the respective guide for that skill.

“So You Want to be a Mountain Guide”

During the evenings of the overnight component, the guiding staff will sit down with the cadets and explain to the group why they made the decision to become a guide for their particular skill. Also, they will explain the steps that were involved and the challenges / obstacles that they had to overcome. This can be done in training groups or, if the platoon is together for the evening, as a whole with each guide taking a turn describing their story.

Competency of an Outdoor Leader – Environmental Stewardship

Environmental stewardship is a three-faceted term that takes into account environmental ethics, ecological literacy, and parks and protected areas management. With the environment experiencing the heavy impact of current culture, it is OLs who must alter the attitudes of others toward preserving and conserving the environment. When leading groups, OLs must practice and enforce the environmental ethical code (represented by the seven principles of Leave No Trace) and serve as the basis for ecologically responsible interactions with the natural environment.

Glaciers, one of the most rapidly vanishing environments on the planet, have reduced in size dramatically in the last 30 years. It is up to those OLs to educate others on the impact of human travel, so that this environment can be enjoyed for years to come. Garbage and waste on the glacier can also have an impact on ecosystems that are supported by the glaciers (eg, rivers, lakes, streams).

As the cycle progresses others competencies of an OL will have been observed. It is up to the adult staff member to help identify and explain the impact of these competencies during the OAA.

Teachable Moments

When following an experiential education approach, being aware of teachable moments is very important. A teachable moment is a situation that naturally arises during the course of the day and provides opportunity for discussion. These moments reinforce program material and should be taken advantage of throughout the cycle. Guiding staff should take the time to explain and emphasize program material as opportunities arise. Some of these teachable moments could include, but are not limited to:

- navigation,
- leave no trace,
- foot care,
- basic astronomy,
- wildlife,
- predicting weather,
- campsite routine, and
- use of equipment.

Sample Schedule

A schedule has been included to provide a sample format to follow for the cycle. The CSTC may choose to adjust this schedule to reflect the choice of activities, time, facilities and available resources.

Sample Schedule: PO S455 (Mountaineer on a Glacier)

Cycle Day 1		
Timings	**Task / Activity**	**Remarks**
0800	Introduction / Briefing	Guides and staff introductions. Briefing : activities, expectations, safety, timings, dress, meals, rules, etc.
0900	Class	S425.08 (Examine Environmental Stewardship).
0940	Break	Cadets arrive with all personal clothing and equipment required for glacier travel.
1020	Classes	S455.01 (Prepare for Glacier Travel).
1220	Lunch	Mess Hall.
1320	Class	S455.01 (Prepare for Glacier Travel).
1400	Classes	S455.02 (Perform Mountaineering Skills).
1700	Supper	Mess hall.
1830	Evening activity	Final packing of clothing and equipment required for glacier travel.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
Cycle Day 2		
Timings	**Task / Activity**	**Remarks**
0080	Depart CSTC Area	Cadets load equipment / gear onto buses.
1000	Arrive at training area	Cadets prepare for glacier travel.
1030	Glacier travel	S455.03 (Mountaineer on a Glacier).
1200	Lunch	Bag lunches.
1240	Glacier travel	S455.03 (Mountaineer on a Glacier).
1700	Arrive at campsite	Team leader organizes set up of campsite.
1730	Supper	IMPs.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader assigned	
Cycle Day 3		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	IMPs
0800	Glacier travel	S455.03 (Mountaineer on a Glacier).
1200	Lunch	Snack bags.
1300	Glacier travel	S455.03 (Mountaineer on a Glacier).
1700	Arrive at campsite	Team leader organizes set up of campsite.
1720	Supper	IMPs.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	

Cycle Day 4		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	IMPs.
0800	Glacier travel	S455.03 (Mountaineer on a Glacier).
1200	Lunch	Snack bags.
1300	Glacier travel	S455.03 (Mountaineer on a Glacier).
1700	Arrive at campsite	Team leader organizes set up of campsite.
1720	Supper	IMPs.
1830	Evening activity	Games, challenges, discussions, etc.
1930	Group debriefing	Led by adult staff. Cadets are required to bring their journals.
2000	Team leader change	
Cycle Day 5		
Timings	**Task / Activity**	**Remarks**
0630	Reveille / ablutions	Tear down / packing of equipment.
0700	Breakfast	IMPs.
0800	Glacier travel	S455.03 (Mountaineer on a Glacier).
1200	Lunch	Bag lunch.
1300	Depart for CSTC	Cadets load equipment / gear onto buses.
1500	Arrive at CSTC	Cadets unload gear from buses.
1500	Cleaning / drying	Separate personal and group equipment.
1700	Supper	Mess hall.
1830	Evening activity	Kit return.
1930	Platoon debriefing	Led by adult staff. Cadets are required to bring their journals.

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ANNEX B

SAMPLE SCHEDULE

WEEK 1

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Pd 1	In Routine	EO S425.01 Review the Competencies of an Outdoor Leader		EO S425.05 Examine Program Management	EO S452.03 Perform Mountain Biking Skills on Novice Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails
Pd 2	In Routine	EO S425.02 Review Goal Setting		EO S452.01 Prepare for Mountain Biking	EO S452.03 Perform Mountain Biking Skills on Novice Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails
Pd 3	In Routine	EO S425.02 Review Goal Setting		EO S452.01 Prepare for Mountain Biking	EO S452.03 Perform Mountain Biking Skills on Novice Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails
Pd 4	In Routine	EO S403.01 Leadership		EO S452.02 Repair a Mountain Bike	EO S452.03 Perform Mountain Biking Skills on Novice Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails
Lunch							
Pd 5	Briefings	EO S425.03 Document Experiences on an Outdoor Adventure Training Activity		EO S452.02 Repair a Mountain Bike	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails
Pd 6	Briefings	EO S425.03 Document Experiences on an Outdoor Adventure Training Activity		EO S452.02 Repair a Mountain Bike	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails
Pd 7	Platoon Commander Period	Recreational Sports (Fitness Assessment)		EO S452.03 Perform Mountain Biking Skills on Novice Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails
Pd 8	Life Skills	Recreational Sports (Fitness Assessment)		EO S452.03 Perform Mountain Biking Skills on Novice Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails	EO S452.04 Perform Mountain Biking Skills on Intermediate Trails

WEEK 2

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Pd 1	PO S402 Participate in a Community Service Activity	EO S425.06 Examine Decision Making and Judgment	EO S453B.02 Paddle a Kayak on Flat Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	
Pd 2	PO S402 Participate in a Community Service Activity	EO S453B. 01 Prepare for Kayaking	EO S453B.02 Paddle a Kayak on Flat Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	
Pd 3	PO S402 Participate in a Community Service Activity	EO S453B. 01 Prepare for Kayaking	EO S453B.02 Paddle a Kayak on Flat Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	
Pd 4	PO S402 Participate in a Community Service Activity	EO S453B.02 Paddle a Kayak on Flat Water	EO S453B.02 Paddle a Kayak on Flat Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	
Lunch							
Pd 5	PO S402 Participate in a Community Service Activity	EO S453B.02 Paddle a Kayak on Flat Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	
Pd 6	PO S402 Participate in a Community Service Activity	EO S453B.02 Paddle a Kayak on Flat Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	
Pd 7	PO S402 Participate in a Community Service Activity	EO S453B.02 Paddle a Kayak on Flat Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	
Pd 8	PO S402 Participate in a Community Service Activity	EO S453B.02 Paddle a Kayak on Flat Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	EO S453B.03 Paddle a Kayak on Moving Water	Course Administration	

ANNEX C

TECHNICAL SPECIALISTS

GENERAL OUTLINE

1. The Department of National Defence (DND) conducts training for the Royal Canadian Army Cadets Organization in the Rocky Mountain Forest Reserve area of Alberta, for approximately 162 Canadian Cadets, 12 British Cadets, and 12 American Cadets and associated supervisors. Training is carried out during the months of July and August of each year for a period of six weeks. Dates and number of cadets undergoing training are confirmed annually by 1 April.

2. Training is conducted in six platoons, each consisting of 30 cadets, on a rotating basis. The six platoons alternate through the six cycles of training, which are all conducted concurrently with a different platoon each week. Each platoon is further broken down into smaller training groups to limit impact on the environment and to meet the requirements of Parks Canada. Under Regional Cadet Support Unit (RCSU) (Prairie) regulations, each group must be under the direct supervision of a Canadian Forces (CF) Officer. The contractor will provide technical advice, instruction and supervision of training and will work in close consultation with the training authority in matters of detailed scheduling and safety.

3. The trainees are cadets ranging from 15–18 years of age, from all parts of Canada and will include unilingual French and English individuals. Also included are individuals from England and the United States, who range in age from late teens to early twenties. It is estimated that approximately one-third of the trainees will be female.

TRAINING REQUIREMENTS

4. The contractor will be required to provide instruction and supervision in various areas of technical expertise to meet the Performance Objectives (POs) outlined in the Qualification Standard and Plan (QSP). A copy will be provided to the contractor each spring annually. This QSP is subject to change with respect to the order and layout of training, but not to the subject matter without prior consultation between the training authority and the contractor. Specifically, the contractor will provide instruction and conduct the appropriate skills activities to meet the course POs (located at Chapter 2, Annex A).

5. Training instructions (latest version to be provided to the contractor each spring annually) apply in principle and the methodology outlined will be used for similar or alternate sites. These training instructions are for guidance and are continually evolving, as Parks Canada rules require new sites and areas to be used. The daily training program outlined in the POs may be utilized as an example for training purposes. The contractor will be required to integrate their training program to the CSTC established training schedule. Timings may be modified by the CSTC Training Officer as circumstances dictate. DND reserves the right to amend or replace any or all portions of the training requirements with similar or like training in quantity / type.

6. DND reserves the right to change the venue to any new venue that will meet the training requirements. Costs associated with resurvey and development of new training sites resulting from a change of venue will form part of funding allocated for the work up period.

CONTRACTOR CRITERIA

7. The contractor will meet the following criteria:

   a. **Pre Planning.** Upon execution of the contract, but prior to commencing any work, the contractor shall submit to the training authority a plan showing all proposed training sites / trails / rivers, etc, along with proof of being in possession of the necessary park / camping permits, registrations, and licensing required for operating in the proposed National / Provincial Parks or forestry areas;

b. **Alpine Trekking.** The contractor shall provide instructors with the necessary technical skills and qualifications to attain the objectives outlined in PO S423 (Alpine Trek on Class 3 Terrain). A minimum of four Association of Canadian Mountain Guides (ACMG) Backpacking Guides are required to meet the minimum ratio of one instructor to nine students (acceptable industry wide standards) and Parks Canada group size (10 persons maximum including instructors);

c. **Mountain Biking.** The contractor shall provide a minimum of four Mountain Bike Guides / Mechanics with the necessary technical skills and qualifications as required to attain the objectives outlined in PO S452 (Ride a Mountain Bike on Intermediate Trails). A minimum of two instructors shall have a current Wilderness Responder First Aid Certification and the others shall have current First Aid and Cardio Pulmonary Resuscitation (CPR) Certification. The Mountain Bike Guide / Mechanic shall also be responsible for:

(1) maintaining the fleet of 50 DND owned mountain bikes on a regular basis. DND will be responsible for providing the tools and parts necessary for maintenance and repair; and

(2) incorporating four staff cadets, provided by the CSTC, into the program;

d. **Canoe / Kayak.** The contractor shall provide instructors with the necessary technical skills and qualifications to attain the objectives outlined in PO S453A (Manoeuvre a Canoe on Moving Water) and PO S453B (Manoeuvre a Kayak on Moving Water). Instructors will develop students' technical skills to meet the standard of the Canadian Recreational Canoeing Association's Level 2 Moving Water Certification. A minimum of two instructors shall have a current Wilderness Responder First Aid Certification and the others shall have current First Aid and Cardio Pulmonary Resuscitation (CPR) Certification. All instructors shall have a qualification of Moving Water Instructor Certification or greater. The following are the minimum instructor / student ratios (acceptable industry wide standards):

(1) for PO S453A (Manoeuvre a Canoe on Moving Water), a minimum of four instructors to maintain a minimum ratio of one instructor to four students (1:4);

(2) for PO S453B (Manoeuvre a Kayak on Moving Water), a minimum of five instructors to maintain a minimum ratio of one instructor to four students (1:4); and

e. **Rock Climbing and Mountaineering.** The contractor shall provide instructors with the necessary technical skills and qualifications to attain the objectives outlined in PO S454 (Climb a Natural Rock Face) and PO S455 (Mountaineer on a Glacier). All instructors shall have current First Aid and Cardio Pulmonary Resuscitation (CPR) Certification. The following are minimum instructor / student ratios (acceptable industry wide standards):

(1) for PO S454 (Climb a Natural Rock Face), a minimum of eight instructors and maintain a minimum ratio of one instructor to four students (1:4). Included will be a minimum of two ACMG certified Rock Guides;

(2) for PO S455 (Mountaineer on a Glacier), a minimum of eleven instructors and maintain a minimum ratio of one instructor to three students (1:3). Included will be a minimum of four fully qualified guides (summer and winter) certified by the ACMG or by the International Federation of Mountain Guide Associations; and

(3) the remainder of the instructional staff are to be Specialty or Assistant Guides certified by the ACMG, and deployed in accordance with the ACMG Technical and Professional Guidelines;

f. **Horseback Riding.** The contractor shall provide a minimum of three instructors with the necessary technical skills and qualifications to attain the objectives outlined in PO S456 (Ride a Horse on Established Trails). All instructors shall have current First Aid and Cardio Pulmonary Resuscitation (CPR) Certification;

g. **Safety.** The contractor shall maintain a safe training environment that meets the safety standards as outlined in A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Standards*, and RCSU (Prairie) General Safety and Operating Manual for Cadets (both to be provided to the contractor), as it applies to the PO and as it applies to the conduct of such training. The safe training environment shall include proceeding to and from any training areas. Where provincial, national, or industry wide standards are more stringent those shall prevail and the contractor shall bring these standards to the Commanding Officer's attention. The contractor is responsible for the safe conduct and supervision of all technical aspects related to training, as detailed in Chapter 2, Annex A;

h. **Contractor Staff.** The contractor shall be required to provide names, resumes, copies of all required certifications and a Canadian Police Information Check for all proposed personnel (including management) upon execution of the contract. Should DND elect its option to extend the contract, the contractor shall submit this documentation 30 calendar days prior to the commencement of training;

i. **On-Site Manager.** The contractor shall be required to have an on-site manager available on a twenty-four hour on-call basis during all periods when cadets and staff are engaged in training;

j. **External Agencies.** The contractor shall be required to negotiate and liaise with Parks Canada officials, provincial authorities, and local governments to provide the necessary training areas to complete the POs. This includes obtaining appropriate wilderness passes for treks and trips within the Parks;

k. **Reference Manual.** The contractor shall provide a comprehensive reference manual to their instructors to support the instruction for the conduct of training for the POs;

l. **Internal Liaison.** The contractor shall provide advice and brief the Commanding Officer about specific training and safety requirements related to the training being conducted. Included will be advice and supervision related medical problems, environmental problems, training issues, etc;

m. **Relationship with Cadet Supervisors.** The contractor shall work in close consultation with the CF member(s) present who are assigned to oversee the instruction of cadets for matters separate from the technical aspects of the training. The contractor and its employees shall comply with the general rules and instructions applicable to the training centre's operation including any dress code necessary to maintain the centres aims and objectives;

n. **Search and Rescue.** The contractor shall initiate search and rescue procedures for requirements related to training. The necessary lines of communications with rescue authorities for implementation of such procedures shall be established. The necessary specialist first aid and evacuation equipment necessary to extract casualties from the training areas shall be provided by the contractor. Third party costs associated with any search and rescue procedures shall be borne by DND;

o. **Instructor Equipment.** The contractor shall ensure that the instructors are equipped and clothed commensurate with the level and type of instruction and training to be undertaken. Instructors shall be equipped with individual first aid kits appropriate to the specific training / instruction being conducted. Such first aid kits shall be provided by the contractor;

p. **Transportation.** The contractor shall provide transportation and drivers to and from all training sites for students, staff and instructors including transport of all equipment, canoes, kayaks, rafts and mountain bikes. Equipment is not to be transported on roof racks. This is to include all-terrain vehicles to be used in support of the mountain biking program. The contractor's drivers shall be in possession of a valid license to operate the vehicle and shall complete familiarization training on the vehicles they will be operating. DND shall provide canoe / kayak trailers;

q. **Communications.** The contractor shall be responsible for all communications, including the following:

(1) ensuring staff are trained in DND established protocols / operating procedures for the routine and emergency operation of the proposed communications system for each training site;

(2) supplying radios / satellite / cell phones, as applicable, and other necessary equipment to include the CSTC Operations Centre base radio station;

(3) providing all communication while operating away from the CSTC. The minimum requirement shall be to maintain communications between the individual groups and between the CSTC and the individual groups. Operations Centre staff shall be provided by DND; and

(4) liaising with Parks Canada and other agencies to arrange for access to / provision of services on non-DND controlled communications system. A listing of radio frequencies used in previous years is located at Appendix 1;

r. **Staff Training.** The contractor shall train all CF members that are associated with the contractor's field training in the operation of the communications safety net. The contractor will also provide first aid and field emergency training for all platoon staff (approximately 18 people) in English and French. The level of training will enable them to respond to field emergencies on all one day hikes or shorter. The contractor will certify successful candidates to the level of Standard Wilderness First Aid and CPR or greater;

s. **French Instruction.** The contractor shall be able to provide instruction in French to a maximum of 70 cadets and in English to the remainder (this ratio may change year to year). Where the contractor is unable to provide the required ratio and has informed RCSU (Prairie) no later than one month prior to the beginning of the summer's training, RCSU (Prairie) has the option of changing the ratio in an effort to meet what the contractor is capable of providing;

t. **Female Instructors.** The contractor shall be able to provide a corps of instructors comprised of at least one-third female instructors. Where the contractor is unable to provide the required ratio and has informed RCSU (Prairie) no later than one month prior to the beginning of the summer's training, RCSU (Prairie) has the option of changing the ratio in an effort to meet what the contractor is capable of providing;

u. **Assessment / Evaluation.** The contractor shall complete the assigned assessments and evaluations for each technical portion, using the assessment instructions and tools located at Chapter 3;

v. **Final Report.** The contractor shall provide on or before September 15 of each year of the contract, a written assessment and report on the achievement of the POs. The report is to list observed strengths and weaknesses for each aspect of the training and should contain recommendations for improvement. Equipment deficiencies and recommendations for replacement equipment, including identification of equipment specifications, must be included in the report. Administrative recommendations may also be included; and

w. **Insurance.** The contractor shall have in effect for the duration of the contract, the following insurance:

(1) a minimum of $10,000,000 Commercial General Liability;

(2) a minimum of $100,000 Property Damage (for Crown property); and

(3) a minimum of $10,000,000 Automobile – Third Party Liability.

DND PROVISION OF SERVICES TO THE CONTRACTOR

8. DND will provide the following:

a. personal clothing and equipment for all cadets and CF members to a level necessary to achieve the training based on CF technical expertise;

b. general equipment necessary to carry out the training based on CF technical expertise;

c. internal transportation for military administrative purposes;

d. any third party costs associated with search and rescue procedures;

e. rations and quarters for the contractor's employees for the duration of the contract to a standard not less than that provided to members of the CSTC, except the rations for the contractor's employees engaged on glacier training and alpine trekking. These rations shall be the responsibility of the contractor; and

f. administrative and training offices to a level determined by the CSTC CO but not less than the minimum necessary to efficiently carry out the contract requirements. Office requirements would include access to all stationary, supplies and photocopying requirements necessary to complete the POs.

PERIOD OF SERVICE

9. The duration of the contract will be two summers with an option to extend the contract one year at a time for three years. Training dates will change each year but the training period of six weeks will remain the same. The contractor will provide lead up and close down time, as required, to meet the training goals.

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APPENDIX 1

RADIO FREQUENCIES

SER	TX	MTS	RX	STN/NET
1.	173.340		173.340	CAMP OPS
2.	172.410		172.410	CAMP ADM
3.	151.490		151.490	CAMP TPT
4.	173.220		173.220	CAMP MED
5.	166.875		164.745	MT BOURGEAU
6.	166.650		166.050	MT HECTOR
7.	167.535		161.165	WILSON
8.	166.935		166.230	SHANK
9.	166.770		166.260	STEPHAN
10.	NA		162.400	WEATHER
11.	NA		162.550	WEATHER
12.	157.770	JL	152.510	CANMORE MTS
13.	157.950	JS	152.690	CANMORE MTS
14.	158.025	XW	152.765	EXSHAW MTS
15.	157.935	XT	152.675	EXSHAW MTS
16.	157.890	YJ	152.630	COCHRANE MTS
17	157.800	YL	152.540	
18.	157.815	XL	152.555	
19.	157.830	JP	152.570	
20.	157.860	YP	152.600	
21.	157.875	XR	152.615	
22.	157.905	XS	152.645	
23.	157.920	YK	152.660	
24.	157.965	XV	152.705	
25.	157.980	YS	152.720	
26.	173.340		173.340	CAMP OPS
27.	172.410		172.410	CAMP ADMIN
28.	151.490		151.490	CAMP TPT
29.	173.220		173.220	CAMP MED

Note. Frequency programming is subject to confirmation of frequencies by contractor.

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ANNEX D

RESOURCE REQUIREMENTS

Notes:

1. Sports equipment required will be dependent upon the sports chosen by the CSTC.
2. A group is designated as a training group while on cycle. Between 8–10 personnel.
3. Resource allocation is based on a platoon of thirty cadets and seven staff and, depending on the item and duration of use, may be drawn on an as required basis, allowing the sharing of resources within the CSTC.

Item	Qty	PO / EO
Hiking boots	1 per cadet	S423.01, S423.02, S423.03, S454.01, S454.02, S454.03, S456.01, S456.02, S456.03
Trekking poles	1 per cadet	S423.01, S423.03, S454.01, S454.01, S454.02, S454.03
Pencils	1 per cadet	S423.02, S423.03
Measuring tape 50 m (164 feet)	1 per Pl	S423.02
First aid kit (expedition style)	4 per Pl	S423.01, S402.01, S423.03, S452.01, S452.03, S452.04, S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.02, S454.03, S456.01, S456.02, S456.03
Communication device (eg, cellular phone or hand-held radio)	4 per Pl	S423.01, S423.03, S452.01, S452.03, S452.04, S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.03, S456.01, S456.02, S456.03
Water purifyer	8 per Pl	S423.01, S423.03, S452.04, S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03, S454.04, S454.01, S454.02, S454.03, S456.01, S456.03
Topographical map	12	S423.01, S423.02, S423.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.02, S454.03, S456.01, S456.02, S456.03
Compass	12	S423.02, S423.03, S452.03, S452.04, S453a.03, S453b.02, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.02, S454.03, S456.01, S456.02, S456.03
Bear spray	8	S423.01, S423.03, S452.03, S452.04, S453a.02, S453a.03, S453b.02, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.03, S456.01, S456.02, S456.03
Expedition field pack	1 per cadet	S423.01, S423.03, S454.01, S454.03

Meals (IMP)	6 per cadet	S423.01, S423.03, S454.01, S454.03
Meals (lunch snack packs)	2 per cadet	S423.01, S423.03, S454.01, S454.03
Waterproof compression sack	1 per cadet	S423.01, S423.03, S452.04, S453a.03, S453b.03, S454.04, S454.01, S454.03, S456.03
Air mattress	1 per cadet	S423.01, S423.03, S452.04, S453a.03, S453b.03, S454.04, S454.01, S454.03, S456.03
Rain gear (GTX top and bottom)	1 per cadet	S423.01, S423.03, S452.03, S452.04, S454.01, S454.03
Rain gear	1 per cadet	S402.01, S452.01, S452.03, S452.04, S453a.03, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.02, S456.01, S456.02, S456.03
Insulating layer (top)		S423.01, S402.01, S423.03, S452.01, S452.03, S452.04, S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.02, S454.03, S456.01, S456.02, S456.03
Insulating layer (bottom)		S423.01, S423.03, S454.01, S454.03
Sleeping bag w\ valise	1 per cadet	S423.01, S423.03, S452.04, S453a.03, S453b.03, S454.04, S454.01, S454.03, S456.03
Liner	1 per cadet	S423.01, S423.03, S452.04, S453a.03, S453b.03, S454.04, S454.01, S454.03, S456.03
Whistle	1 per cadet	S423.01, S423.03, S452.01, S452.03, S452.04, S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03, S454.01, S454.03
Water carrier	1 per cadet	S423.01, S423.03, S452.01, S452.03, S452.04, S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.02, S454.03, S456.01, S456.02, S456.03
Sealable plastic bags	4 per cadet	S423.01, S454.01
Garbage bags	2 per cadet	S423.01, S454.01
Head lamp	1 per cadet	S423.01, S423.03, S452.04, S453a.03, S453b.03, S454.04, S454.01, S454.03, S456.03
Batteries	4 boxes per Pl	S423.01, S423.03, S452.04, S453a.03, S453b.03, S454.04, S454.01, S454.03, S456.03
Matches	1 box per cadet	S423.01, S423.03, S454.01, S454.03

Sunscreen	1 per 3 cadets	S423.01, S423.03, S452.01, S452.03, S452.04, S453a.01, S453a.02, S453a.03, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.02, S454.03, S456.01, S456.02, S456.03
Bug repelant	1 per cadet	S423.01, S423.03, S452.03, S452.04, S453a.02, S453a.03, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.02, S454.03, S456.01, S456.02, S456.03
Lip balm	1 per cadet	S423.01, S423.03, S452.01, S452.03, S452.04, S453a.01, S453a.02, S453a.03, S453b.03, S454.01, S454.02 S454.03, S454.04, S454.01, S454.02, S454.03, S456.01, S456.02, S456.03
Toilet paper	1 per 3 cadets	S423.01, S423.03, S452.04, S454.01, S454.03
Tent	1 per 2 / 3 cadets	S423.01, S423.03, S452.04, S453a.03, S453b.03, S454.04, S454.01, S454.03, S456.03
Stove	8 per Pl	S423.01, S423.03, S454.01, S454.03
Fuel bottle	8 per Pl	S423.01, S423.03, S454.01, S454.03
Fuel	One box per Pl	S423.01, S423.03, S454.01, S454.03
Pot set	8 per Pl	S423.01, S423.03, S454.01, S454.03
Rope 15 m (50 feet)	4 per Pl	S423.01, S423.03, S454.01, S454.03
Expedition repair kit container	4 Per Pl	S423.01, S423.03, S454.01, S454.03
Duct tape	1 per container	S423.01, S423.03, S454.01, S454.03
Lip balm / petroleum jelly	1 per container	S423.01, S423.03, S454.01, S454.03
Lubricating oil	1 per container	S423.01, S423.03, S454.01, S454.03
An assortment of fabric swatches	Assorted	S423.01, S423.03, S454.01, S454.03
An assortment of plastic buckles	Assorted	S423.01, S423.03, S454.01, S454.03
An assortment of needles	Assorted	S423.01, S423.03, S454.01, S454.03
Thread (heavy duty)	1 roll per container	S423.01, S423.03, S454.01, S454.03
Dental floss	1 per container	S423.01, S423.03, S454.01
Aluminum pole-repair sleeve	1 per container	S423.01, S423.03, S454.01, S454.03
Adhesive / seam sealer (Seam Grip)	1 per container	S423.01, S423.03, S454.01, S454.03
Alcohol swabs	Assorted	S423.01, S423.03, S454.01, S454.03
Air mattress patches	Assorted	S423.01, S423.03, S454.01, S454.03

2–3 m (5–10 feet) of nylon parachute cord	1 per container	S423.01, S423.03, S454.01, S454.03
Heavy duty rubber bands	Assorted	S423.01, S423.03, S454.01, S454.03
Zap straps	Assorted	S423.01, S423.03, S454.01, S454.03
1–2 m (3–6 feet) of tubular webbing	1 per container	S423.01, S423.03, S454.01, S454.03
A lightweight multi-tool	1 per container	S423.01, S423.03, S454.01, S454.03
Marking tape	1 roll	S423.02,
6-foot tables	4	S423.02
Journal (approx. 8.5 x 5.5 in.)	1 per cadet	PO S425
Mountain bike	1 per cadet	S452.01, S425.02, S452.03, S452.04
Reflective vest	8 per Pl	S452.01, S452.03, S452.04
Mountain bike repair kit container	5	S452.01, S425.02, S452.03, S452.04
Spare tube	2 per container	S452.01, S425.02, S452.03, S452.04
Tube patch kit	Assorted	S452.01, S425.02, S452.03, S452.04
Mini pump with gauge	1 per 3 cadets	S452.01, S425.02, S452.03, S452.04
Bike multi tool	1 per container	S452.01, S425.02, S452.03, S452.04
Bike trail map	8 per Pl	S452.03, S452.04
Day pack	1 per cadet	S452.03, S452.04, S456.01
Chain (at least the length of one link)	1 per group	S425.02
Bike stand	2	S452.01, S425.02, S452.03
Tire levers	1 per 3 cadets	S452.01, S425.02, S452.03
Cassette scraper	1 per 3 cadets	S452.01, S452.03
Chain-cleaning box	1 per 3 cadets	S452.01, S452.03
Degreaser	1 container	S452.01, S452.03
Large brush	1 per 3 cadets	S452.01, S452.03
Rubber gloves	1 pair per cadet	S452.01, S452.03
Bucket	1 per 3 cadets	S452.01, S452.03
Cleaning cloth	1 per 2 cadets	S452.01, S452.03
Small Brush	1 per 3 cadets	S452.01, S452.03

Soap	1 container	S452.01, S452.03
Lubricating oil	1 container per group	S452.01, S452.03
Chain tool	1 per 3 cadets	S452.01, S425.02, S452.03
Gear or masking tape	1 roll per group	S452.01, S425.02, S452.03
Canoe	1 per 2 cadets	S453a.01, S453a.02, S453a.03
Canoe paddle	1 per cadet	S453a.01, S453a.02, S453a.03
Helmet	1 per cadet	S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03, S456.01, S456.03
Personal Floatation Device	1 per cadet	S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03
Wetsuit or dry suit	1 per cadet	S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03
Boyant heaving line or throw bag	1 per cadet	S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03
Bailer	1 per canoe	S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03
Painter line	2 per canoe	S453a.01, S453a.02, S453a.03
Canoe repair kit	1 per group	S453a.01, S453a.02, S453a.03
River map	1 per group	S453a.02, S453a.03, S453b.02, S453b.03
Water proof day bag	1 per cadet	S453a.01, S453a.02, S453a.03, S453b.01, S453b.02, S453b.03
Kayak	1 per cadet	S453b.01, S453b.02, S453b.03
Spary skirt	1 per cadet	S453b.01, S453b.02, S453b.03
Kayak paddle	1 per cadet	S453b.01, S453b.02, S453b.03
Floatation bags	2 per kayak	S453b.01, S453b.02, S453b.03
Kayak repair kit	1 per group	S453b.01, S453b.02, S453b.03
10.5 kermantle dynamic rope	1 per rope bag	S454.01, S454.03, S454.04
Locking steel carabiners	2 per rope bag	S454.01, S454.03, S454.04
Locking aluminum carabiners	2 per rope bag	S454.01, S454.03, S454.04
12 inch slings	1 per rope bag	S454.01, S454.03, S454.04
Quick draws	Assortment	S454.01, S454.03, S454.04

Climbing back pack	1 per cadet	S454.01, S454.02, S454.03, S454.04
Climbing pants	1 per cadet	S454.01, S454.02, S454.03, S454.04
Climbing helmet	1 per cadet	S454.01, S454.02, S454.03, S454.04, S454.01, S454.02, S454.03
Climbing shoes	1 per cadet	S454.01, S454.02, S454.03, S454.04
Chalk with bag	1 per cadet	S454.01, S454.02, S454.03, S454.04
Belay device	1 per cadet	S454.01, S454.03, S454.04
Locking aluminum carabiners	4 per cadet	S454.01, S454.03, S454.04, S454.01, S454.02, S454.03
7-mm kermantle rope	2 lengths per cadet	S454.01, S454.03, S454.04, S454.01, S454.02, S454.03
12-inch sling	1 per cadet	S454.01, S454.03, S454.04
Crampons	1 pair per cadet	S454.01, S454.02, S454.03
Ice tool	1 per cadet	S454.01, S454.02, S454.03
Eye Protection (sunglasses or goggles)	1 per cadet	S454.01, S454.03
10.5-mm dry treated kermantle dynamic rope	1 per rope team	S454.01, S454.02, S454.03
Gloves (outers [GTX] and liner)	1 pair per cadet	S454.01, S454.03
Gaiters	1 pair per cadet	S454.01, S454.03
Horse	1 per cadet	S456.01, S456.02, S456.03
Tack	1 per horse	S456.01, S456.02, S456.03
Saddle bags	2 per horse	S456.01, S456.03
Horse grooming kit container	1 per 2 cadets	S456.02, S456.03
Hoof pick	1 per container	S456.02, S456.03
Curry comb	1 per container	S456.02, S456.03
Dandy brush	1 per container	S456.02, S456.03
Wash cloth	1 per container	S456.02, S456.03
Mane comb	1 per container	S456.02, S456.03

ANNEX E

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CHAPTER 3

CADET EVALUATION

PURPOSE

1. The purpose of this chapter is to outline the specific evaluation requirements for achievement of Leadership and Challenge (L & C) qualification.

LEARNER EVALUATION

2. A-P9-050-000/PT-Z01, *Manual of Individual Training and Education, Volume 1* defines learner evaluation as, "the assessment of progress made by participants during an instructional programme (formative evaluation) and of their achievement at the end of the programme (summative evaluation)."

3. Formative evaluation, or assessment **for** learning, takes place during a phase of instruction and helps the cadet and instructor recognize progress or lapses in learning. Through formative evaluation, the instructor can:

a. identify when corrective or remedial action is required;

b. plan the next steps in instruction, provide the cadet with feedback so they can improve; and

c. reinforce learning to aid the cadet in retaining information.

4. Formative evaluation may also incorporate the Performance Checks (PCs) employed in summative evaluation, allowing the cadet opportunities for practice prior to the PC. Details for assessment for learning are outlined within the applicable lesson specifications found in Chapter 4.

5. Summative evaluation, or assessment **of** learning, takes place to determine whether learners have achieved POs, or critical EOs (those deemed prerequisites to further individual training and education) and are used at the end of a phase of instruction. Details for assessment of learning are detailed within this chapter.

CADET EVALUATION DESIGN AND DEVELOPMENT

6. Cadet evaluation is designed and developed incorporating contemporary professional practices from the fields of education and youth development as well as considering best practices in use within the Canadian Cadet Organizations (CCO).

7. Cadet evaluation is designed and developed so that all cadets are capable of achieving all POs and associated EOs. To motivate the cadet to learn, cadet evaluation builds on success and confidence rather than demotivating them with failure and defeat.

8. The following fundamental assessment principles shall guide the design, development and conduct of L & C assessment activities:

a. in advance of training, the instructor shall inform the cadet of POs and EOs associated with the qualification;

b. in advance of training, the instructor shall inform the cadet of the assessment plan for the qualification and provide the cadet with an opportunity to review the applicable forms used in assessment;

c. assessment information shall be shared between the instructor and the cadet and used to revise and guide instruction and learning;

d. the instructor shall provide feedback that is descriptive, constructive, frequent, and timely; helping the cadet identify strengths and address areas requiring improvement;

e. the cadet shall be actively, consistently and effectively involved in assessment, including learning to manage their own learning through the skills of self-assessment; and

f. the cadet shall be encouraged to actively, consistently and effectively communicate with others about their learning progress.

CP DEVELOPMENTAL PERIODS (DPs)

9. The CP is designed across adolescent DPs adapted to suit the CP target population. Outlined in each DP are specific philosophies and approaches to learning and assessment that influence design, development and conduct of cadet training and assessment.

10. A DP is a time frame, during a cadet's progression through the CP, in which the cadet participates in training and is provided opportunities to develop desired knowledge, skills and attitudes that support the aim of the CP and contribute to the achievement of the CP outcomes.

11. Progressive training levels, and associated learning objectives, distinguish each DP; ensuring training is relevant, achievable and age-appropriate for the cadet population. DPs and associated training levels are designed to be completed in a sequential manner and are also fluid, which allows a cadet to progress to the next training level or DP while still working on completion of learning objectives from the previous level or DP.

12. The design and development of cadet training and evaluation is based on the basic overview of the DP characteristics located at Chapter 3, Annex A.

CADET ASSESSMENT OF LEARNING PLAN

13. The Assessment of Learning Plan located at Chapter 3, Annex B, provides an overall strategy for using assessment activities to determine if the cadet meets the requirements for the L & C qualification. The Assessment of Learning Plan will:

a. provide an outline of each assessment of learning activity; including its purpose, when it will occur and details the assessment instrument(s) used to support cadet evaluation;

b. identify the learning target(s) associated with the PO and / or EO being assessed, to include:

(1) **Knowledge Mastery.** The facts, concepts and theory a cadet needs to know;

(2) **Reasoning Proficiency.** A cadet uses what they know to solve a problem, make a decision, make a plan, think critically, set goals, or self-assess;

(3) **Skills.** Performance demonstration; where the cadet demonstrates their ability to perform a skill. To be assessed, these performances must be demonstrated by the cadet and observed by an assessor;

(4) **Ability to Create Products.** A cadet uses their knowledge, reasoning and skills to create a concrete product; and / or

(5) **Attitudinal / Dispositional Changes.** A cadet's attitude about learning, safety, conduct, etc. Targets in this realm reflect attitude and feeling. They represent important affective goals we hold for a cadet as a by-product of their CP experience, and as such are not generally assessed for the purpose of attaining a qualification.

c. identify the assessment method(s) that best matches PO and / or EO learning targets, to include:

(1) **Selected Response.** A cadet selects the correct or best response from a list provided. Formats include multiple choice, true / false, matching, short answer, and fill-in-the-blank questions. Although short answer and fill-in-the-blank questions do require the cadet to generate an answer, they call for a very brief answer that is counted as right or wrong, so these have been included in the selected response category;

(2) **Extended Written Response.** A cadet is required to construct a written answer in response to a question or task rather than select one from a list. An extended written response is one that is at least several sentences in length;

(3) **Performance Assessment.** This assessment method is based on observation and judgment; a performance or product is observed and a determination is made as to its quality; and / or

(4) **Personal Communication.** Gathering information about a cadet through personal communication; learning is assessed through interpersonal interaction with the cadet.

ASSESSMENT INSTRUMENTS

14. Specific assessment instruments have been designed to support each assessment activity within the Assessment of Learning Plan. These are meant to standardize assessment activities and cadet evaluation for all cadets attempting the qualification. Assessment instruments are located at the appendices to Chapter 3, Annex B.

ADDITIONAL ASSESSMENT OF LEARNING ACTIVITIES

15. No additional cadet evaluations, eg, theory tests or performance checks, are to be used to determine L & C qualification. Therefore, these national standards are not to be supplemented with additional CSTC standards.

LEADERSHIP AND CHALLENGE QUALIFICATION STANDARD

16. The standard for the L & C qualification is successful completion of each POs as outlined in the L & C Qualification Record.

RECOGNITION OF ENHANCED PROFICIENCY ACHIEVEMENT

17. Certain POs within the Assessment of Learning Plan allow for recognition of an enhanced proficiency level of achievement. The assessment instructions for the applicable PCs outline how proficiency levels are achieved and recorded on the Qualification Record. This information highlights the cadet's strength(s) within the achievement of the qualification. The following definitions differentiate baseline proficiency and enhanced proficiency levels of achievement:

a. **Baseline Proficiency.** A cadet achieves baseline proficiency by demonstrating the performance standard outlined in the applicable PO; and

b. **Enhanced Proficiency.** A cadet achieves enhanced proficiency by exceeding the performance standard outlined in the applicable PO.

CADETS NOT MEETING THE QUALIFICATION STANDARD

18. A cadet who does not meet the qualification standard for any PO shall be given a reasonable opportunity to achieve the standard. Unless otherwise specified in the Assessment of Learning Plan and associated assessment instruments, there is no limit to the number of additional opportunities that may be afforded to the cadet, provided it is within the time and resource limitations of the CSTC.

19. If, by the end of the course, a cadet has yet to successfully complete any PO, they will be assessed as incomplete.

20. CATO 15-22, *Conduct and Discipline–Cadets*, and CATO 13-26, *Return to Unit–Cadets*, provide direction on dealing with cadets not meeting the qualification standard due to:

a. attendance at mandatory training;

b. conduct; or

c. medical reasons.

RECORDING AND REPORTING CADET ACHIEVEMENT

21. The progress of each cadet shall be recorded on the Leadership and Challenge Qualification Record, located at Chapter 3, Annex C. The Leadership and Challenge Qualification Record for each cadet shall be forwarded to the applicable corps, through the appropriate chain of command. Commanding Officers are responsible for ensuring the results are recorded on each cadet's DND 2399, *Cadet Personnel Record*.

LEADERSHIP AND CHALLENGE CERTIFICATE OF QUALIFICATION

22. A CF 558, *Cadet Certificate of Qualification* (NSN 7530-21-870-7685), shall be awarded to each cadet upon successful completion of the L & C qualification.

MONITORING CADET PROGRESS

23. An initial interview shall be conducted with each cadet at the start of the course to discuss qualification; objectives, schedule, and assessment activities. Course staff should take this opportunity to get to know the cadet and to help the cadet set personal course goals.

24. Course staff will be required to meet with each cadet throughout the course to discuss learning progress towards qualification. These feedback interviews are related to the assessment for learning activities outlined within the applicable lesson specifications located in Chapter 4.

25. A final interview shall be conducted with each cadet at the end of the course to discuss;

a. the completed L & C Qualification Record;

b. the cadet's goals that were discussed during the initial interview; and

c. new goals for returning back to the corps.

26. Guidelines for conducting cadet interviews are located in Chapter 3, Annex D and the Cadet Interview Form is located in Chapter 3, Annex D, Appendix 1.

27. To reinforce training and personal development, course staff shall monitor cadets to ensure they actively participate in daily and weekly individual and group reflection.

TRAINING COUNSELLING SESSION

28. A training counselling session is used when a cadet is having difficulties progressing toward qualification and an intervention is required to set goals for corrective action and / or remedial instruction. These counselling sessions focus on training related issues. The Pl Comd is responsible for conducting training counselling sessions. Guidelines for conducting training counselling sessions are located in Chapter 3, Annex E and the Training Counselling Session Form is located in Chapter 3, Annex E, Appendix 1.

TRAINING REVIEW BOARD (TRB)

29. When a cadet continues to have difficulties or has significant difficulty progressing towards qualification, the Pl Comd should meet with the Crse O to determine what additional intervention is required to ensure improvement or determine if another course of action is more appropriate considering the circumstances, eg, Return to Unit (RTU). The Crse O is responsible for conducting a TRB and may include other staff, eg, Specialty Instructors, Medical Staff, Standards Staff. Normally, the cadet is not present during the TRB, but the cadet's perspective and participation can help determine the best course of action. Guidelines for conducting a TRB are located in Chapter 3, Annex F and the TRB Form is located in Chapter 3, Annex F, Appendix 1.

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ANNEX A

CHARACTERISTICS OF CP DPs

Developmental Period (DP)	Developmental Period 1 (DP1)		Developmental Period 2 (DP2)		Developmental Period 3 (DP3)
Ages	**12 - 14**		**15 - 16**		**17 - 18**
Years	**Y1**	**Y2**	**Y3**	**Y4**	**Y5+**
DP Overview	*Learning in the Cadet Program is designed around three progressive, developmental periods (DPs). The mental, physical, emotional, and social development of a cadet are considered in these age-appropriate DPs. The cadet develops and ultimately refines higher-level thinking skills (reasoning, reflective thinking, problem solving) as they progress through each DP.*				
Age-Appropriate Learning	**Experience-based**		**Developmental**		**Competency**
DP Description	*The cadet has well-developed automatic responses however, the area of the brain that processes higher-level thinking is not yet mature. Effective learning is active and interactive with lots of practical experiences.*		*The cadet starts developing higher-level thinking skills such as problem-solving skills. Effective learning is interactive and practical, allowing cadets to start making decisions within their learning process.*		*The cadet is refining higher-level thinking skills. Effective learning is interactive and allows for increased individual responsibility and independent learning.*
Assessment Expectation	**Participatory**		**Baseline Proficiency**		**Enhanced Proficiency**
Assessment Purpose	• Stimulation and maintenance of an enhanced interest in the CP. NOTE: Exposing the cadet to a variety of training activities and learning opportunities with the assessment expectation focused on participation will help accomplish this. • Exposure to a broad knowledge base and skill set. NOTE: CSTC Summer 2 courses will begin to expose the cadet to some specific specialty areas, which will allow the cadet to discover possible areas of particular interest.		• Development of a broad knowledge base and skill set as well as introducing reasoning proficiency. • Ongoing determination and development of specific specialty areas of interest and capability. • Recognition of enhanced proficiency achievement. • Ongoing stimulation and maintenance of an enhanced interest in the CP.		• Development of an enhanced knowledge, reasoning or skill proficiency in a targeted specialty area – related to interest, capability and cadet program requirements. • Ongoing development of the broad knowledge base and skill set as well as reasoning proficiency. • Ongoing recognition of enhanced proficiency achievement. • Ongoing stimulation and maintenance of an enhanced interest in the CP.

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ANNEX B

ASSESSMENT OF LEARNING PLAN – LEADERSHIP AND CHALLENGE

EC / PC	Scope	Purpose	Target	Method	How	When	Resources	Limitations
PO S402 - Participate in a Community Service Activity								
Nil.								
PO S403 - Lead a Team During an Outdoor Adventure Activity (OAA)								
S403 PC	PO S403	To assess the cadet's ability to lead a team during an OOA.	Skills and Knowledge	Performance Assessment	The cadet shall conduct oneself in a professional manner, attend an initial briefing, brief team members, implement morning, daily, and evening routines, and complete journal entries.	When the cadet is performing the role of the team leader.	Chapter 3, Annex B, Appendix 1 rubric.	Each cadet will have the opportunity to complete at least one (two if required) assessment for learning (practice) during the first two (or third as required) cycles. The final or formal assessment of learning shall occur during the last four cycles (or three as required).
PO S410 - Attain Wilderness First Aid Qualification								
S410 PC	PO S410	To assess the cadet's ability to perform first aid.	Skills and Knowledge	Performance Assessment and Selected Response	IAW the practices, standards and policies of the first aid training provider.	Upon completion of lessons related to PO S410.	As per first aid training provider requirements	IAW the practices, standards and policies of the first aid training provider.
PO S423 - Alpine Trek on Class 3 Terrain								
S423 PC	PO S423	To assess the cadet's ability to alpine trek on class 3 terrain.	Skills	Performance Assessment	The cadet shall maintain personal hiking rhythm, ascend hills, descend hills, navigate using a route card, follow campsite routine, and adhere to the principles of leave no trace camping.	During EO S423.03.	Chapter 3, Annex B, Appendix 2 checklist.	Nil.

EC / PC	Scope	Purpose	Target	Method	How	When	Resources	Limitations
PO S425 - Reflect on the Application of the Competencies of an Outdoor Leader								
S425 PC	PO S425	To assess the cadet's ability to reflect on the application of the competencies of an outdoor leader.	Knowledge Mastery and Reasoning Proficiency	Performance Assessment	The cadet shall identify the competency relationship, complete journal entries, and contribute thoughts during a team debriefing at the conclusion of an OAA.	When the cadet is performing the role of the team leader, at the conclusion of the day.	Chapter 3, Annex B, Appendix 3 checklist.	Nil.
PO S452 - Ride a Mountain Bike on Intermediate Trails								
S452 PC	PO S452	To assess the cadet's ability to ride a mountain bike on intermediate trails.	Skills	Performance Assessment	The cadet shall fit a mountain bike, brake, ascend and descend hills, log hop over a 5–7 cm high obstacle, and corner.	During EOs S452.03 and S452.04.	Chapter 3, Annex B, Appendix 4 checklist.	Nil.
PO S453A - Manoeuvre a Canoe on Moving Water								
S453A PC	PO S453A	To assess the cadet's ability to manoeuvre a canoe on moving water.	Skills	Performance Assessment	The cadet shall carry out immediate action on capsizing, scout a set of rapids, and execute an eddy turn and an upstream ferry (both as the bow and stern paddler).	During EO S453.03A.	Chapter 3, Annex B, Appendix 5 checklist.	The cadet shall only complete one assessment, either PO 453A or PO 453B. The cadet shall be assessed in both the bow and stern.
PO S453B - Manoeuvre a Kayak on Moving Water								
S453B PC	PO S453B	To assess the cadet's ability to manoeuvre to kayak on moving water.	Skills	Performance Assessment	The cadet shall carry out immediate action on capsizing, scout a set of rapids, and execute an eddy turn and an upstream ferry.	During EO S453.03B.	Chapter 3, Annex B, Appendix 6 checklist.	The cadet shall only complete one assessment, either PO 453A or PO 453B.

EC / PC	Scope	Purpose	Target	Method	How	When	Resources	Limitations
PO S454 - Climb a Natural Rock Face								
S454 PC	PO S454	To assess the cadet's ability to climb a natural rock face.	Skills	Performance Assessment	The cadet shall deliver and respond to climb commands, belay a climber, and climb a natural rock face.	During EOs S454.02, S454.03 and S454.04.	Chapter 3, Annex B, Appendix 7 checklist.	Nil.
PO S455 - Mountaineer on a Glacier								
S455 PC	PO S455	To assess the cadet's ability to mountaineer on a glacier.	Skills	Performance Assessment	The cadet shall perform mountaineering skills, demonstrate glacier travel techniques, and complete a self-arrest with an ice tool.	During EOs S455.02 and S455.03.	Chapter 3, Annex B, Appendix 8 checklist.	Nil.
PO S456 - Ride a Horse on Established Trails								
S456 PC	PO S456	To assess the cadet's ability to ride a horse on established trails.	Skills	Performance Assessment	The cadet shall care for a horse, tack up a horse, mount, ride and dismount a horse, communicate with a horse, and remove the tack from a horse.	During EO S456.03.	Chapter 3, Annex B, Appendix 9 checklist.	Nil.

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ANNEX B, APPENDIX 1
S403 PC
ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions, S403 PC Assessment Rubric, and S403 PC Assessment Checklists and become familiar with the material prior to conducting the assessment.

Photocopy two copies of the S403 PC Assessment Rubric and Checklist per cadet (one for the assessor and one for the cadet to perform a self-assessment).

PRE-ASSESSMENT ASSIGNMENT

The cadet shall review the S403 PC Assessment Rubric and Checklist and become familiar with the assessment criteria.

ASSESSMENT METHOD

Performance assessment and personal communication were chosen as it allows the assessor to observe the cadet's ability to perform the required skill(s) and make a judgment on the quality of performance.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this PC is to assess the cadet's ability to lead a team during an OOA.

RESOURCES

- S403 PC Assessment Rubric,
- S403 PC Checklist, and
- Resources as per the leadership assignment.

ASSESSMENT ACTIVITY LAYOUT

This assessment will be conducted during each cycle, while a cadet is leading the team during an OOA.

ASSESSMENT ACTIVITY INSTRUCTIONS

The duties of a team leader are based on a 24 hour rotation. The team leader will start their assignment at 2000hrs and end at 2000hrs the next day, unless otherwise specified.

1. Deliver an initial briefing to the cadet team leader. The initial briefing will outline the specific details of the OOA and will include information such as:
   - timings (wake up, first timing of the day, meals, etc.),
   - equipment needed for the activity,

- safety guidelines, and
- tasks to be completed.

2. Ensure the cadet understands the leadership assignment.
3. Have the cadet conduct the leadership assignment.
4. Throughout the 24 hour time period, use the Assessment Rubric as a guide. Make notes of observations and record results on the corresponding Assessment Checklist.
5. Upon completion of the leadership assignment, have the cadet assess their performance using the Assessment Rubric and Checklist. Ensure the cadet understands their self-assessment will not be recorded on their qualification record.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the S403 PC Assessment Checklist as:
   a. **Incomplete**. The cadet has not achieved the performance standard by not completing at least two of the required skills;
   b. **Completed with difficulty**. The cadet has achieved the performance standard by receiving a minimum of “incomplete” on not more than one of the criteria and a minimum of “completed with difficulty” on all other criteria;
   c. **Completed without difficulty**. The cadet has achieved the performance standard by receiving a minimum of “completed with difficulty” on all criteria and “completed without difficulty” on five or more of the criteria; or
   d. **Exceeded standard**. The cadet has achieved the performance standard by receiving a minimum of “completed without difficulty” on all criteria and “exceeded standard” on three or more of the criteria.
2. Record notes and observations in the assessor’s feedback section of the Assessment Checklist.
3. Sign and date the Assessment Checklist.
4. Ensure a copy of the Assessment Checklists is attached to the cadet's training file.
5. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss the cadet's self-assessment on their performance.

Following each assessment, ask the cadet what they felt went right during the leadership assessment, what did not go well and ask the cadet how they would improve their performance if given the chance to complete the leadership assignment again.

Discuss the performance results of each section of the Assessment Rubric with the cadet.

Discuss the overall performance results with the cadet and provide the cadet with a copy of the completed Assessment Checklist.

S403 PC ASSESSMENT RUBRIC
LEADERSHIP ASSIGNMENT

	Incomplete (I)	Completed With Difficulty (D)	Completed Without Difficulty (C)	Exceeded the Standard (E)
Attend an initial briefing.	Did not attend the initial briefing.	Attended the initial briefing at the incorrect location / time / was not prepared to take notes / did not ask or answer questions.	Attended the initial briefing at the correct location and time and was prepared to take notes. Asked clarification questions and answering questions as applicable.	
Brief team members.	Did not brief team members on the next day's activities.	Briefed team members but did not follow the process of outlining the scheduled activities, identifying timings, setting goals, and outlining safety guidelines as required.	Briefed team members using the process of outlining the scheduled activities, identifying timings, setting goals, and outlining safety guidelines as required.	
Implement morning routine.	Did not implement morning routine.	Implemented morning routine with some assistance from team members or platoon staff / guide.	Implemented morning routine by waking up team members and enforcing campsite routine.	Consistently implemented morning routine and ensured all team members were aware of expectations.
Implement daily routine.	Did not implement daily routine.	Implemented daily routine but missed timings / did not ensure members had assigned equipment / did not supervise breaks and meals as required.	Implemented daily routine by meeting timings, ensuring members had assigned equipment and supervising breaks and meals as required.	Consistently implemented daily routine and ensured all team members were aware of expectations.
Manage conflict within the team.	Did not manage conflict within the team.	Managed some conflict within the team; often required assistance from other team members or platoon staff / guide.	Managed conflict by addressing issues as they arose and dealing with them.	Consistently managed conflict by anticipating issues and dealing with them effectively.
Promote positive team interactions.	Did not promote positive team interactions.	Promoted positive team interaction periodically, with minimal enthusiasm.	Promoted positive team interactions frequently.	Promoted positive team interactions consistently and maintained motivation.
Implement evening routine.	Did not implement evening routine.	Implemented evening routine with some assistance from team members or platoon staff / guide.	Implemented evening routine by ensuring campsite routine was adhered to, following the platoon schedule, as required, and completing a journal entry to reflect on the leadership experience.	Consistently implemented evening routine and ensured all team members were aware of expectations.
Perform self-assessment.	Did not complete the self-assessment.		Completed the self-assessment.	

S403 PC ASSESSMENT CHECKLIST
LEADERSHIP ASSIGNMENT

Cadet's Name: _____ Platoon: _____

Date: _____

	Assessment (circle one)	Notes
Attend an initial briefing.	**I D C**	
Brief team members.	**I D C**	
Implement morning routine.	**I D C E**	
Implement daily routine.	**I D C E**	
Manage conflict within the team.	**I D C E**	
Promote positive team interactions.	**I D C E**	
Implement evening routine.	**I D C E**	
Perform self-assessment.	**I C**	

I = Incomplete D = Completed With Difficulty C = Completed Without Difficulty E = Exceeded Standard

Assessor's Feedback:

Overall Performance Assessment:

	PO S403 Overall Assessment							
Check One	**Incomplete**		**Completed With Difficulty**		**Completed Without Difficulty**		**Exceeded Standard**	
Overall Performance	The cadet has not achieved the performance standard by not completing at least two of the required skills.		The cadet has achieved the performance standard by receiving a minimum of "incomplete" on not more than one of the criteria and a minimum of "completed with difficulty" on all other criteria.		The cadet has achieved the performance standard by receiving a minimum of "completed with difficulty" on all criteria and "completed without difficulty" on five or more of the criteria.		The cadet has achieved the performance standard by receiving a minimum of "completed without difficulty" on all criteria and "exceeded standard" on three or more of the criteria.	

Assessor's Name:	**Position:**
Assessor's Signature:	**Date:**

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ANNEX B, APPENDIX 2

S423 PC

ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions and S423 PC Assessment Checklist and become familiar with the material prior to conducting the assessment.

There is no time allotted for this PC. It is to be administered during EO S423.03 (Perform Trekking Skills).

Photocopy the S423 PC Assessment Checklist.

Obtain all resources required for the assessment.

PRE-ASSESSMENT ASSIGNMENT

Have the cadet review the assessment activity instructions and the S423 PC Assessment Checklist to become familiar with the material prior to participating in the assessment.

ASSESSMENT METHOD

Performance assessment was chosen to observe the cadet while performing trekking skills.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this PC is to assess the cadet's ability to perform trekking skills.

RESOURCES

- S423 PC Assessment Checklist,
- Hiking boots,
- Trekking pole,
- Map,
- Compass, and
- Route card.

ASSESSMENT ACTIVITY LAYOUT

This assessment will be conducted during EO S423.03 (Perform Trekking Skills).

ASSESSMENT ACTIVITY INSTRUCTIONS

This PC is ongoing throughout the cycle. The assessor will be required to observe the cadets in their group during the conduct of the alpine trekking cycle and use the Assessment Checklist to monitor their performance.

Assessment checklist should be filled out near the end of the cycle. Observe each cadet and make notes on their progress. Make a judgment and indicate (by placing the appropriate letter in each box) on the Assessment Checklist whether the task was:

- **Incomplete (I).** The skill was not attempted or not completed even with assistance.
- **Completed with difficulty (D).** The skill was completed with great difficulty / assistance.
- **Completed without difficulty (C).** The skill was completed without difficulty / minimal assistance.
- **Exceeded standard (E).** The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Make notes of observations for the purposes of providing descriptive post-assessment feedback.

To ensure a safe environment, the cadet shall be afforded two safety-related warnings while completing this assessment. On the third warning they shall be assessed as incomplete on the PO and a note shall be made in the feedback section. Warnings shall be issued for failure to adhere to the safety principles taught. When a warning is given, clearly identify what the cadet has done, what steps they need to take to correct the error, and what action they should take in the future to avoid the error.

1. Provide several opportunities for the cadet to perform each skill.
2. Provide feedback to the cadet and make note of their progress for each skill on the comments section of the assessment checklist.
3. Assess the cadet's performance for each skill at the end of the cycle and record the results on the Assessment Checklist.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the S423 PC Assessment Checklist as:
   a. **Incomplete (I).** The cadet has not achieved the performance standard by not completing at least two of the required skills;
   b. **Completed with difficulty (D).** The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete;
   c. **Completed without difficulty (C).** The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing eight or more skills without difficulty / exceeded the standard; or
   d. **Exceeded standard (E).** The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on eight or more skills.
2. Total all letters attributed in each column and assign a letter value to the overall skill assessment.
3. Sign and date the Assessment Checklist.

4. Ensure a copy of the Assessment Checklist is attached to the cadet's training file.

5. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss the performance results of each section of the Assessment Checklist with the cadet.

Discuss the overall performance result with the cadet.

S423 PC ASSESSMENT CHECKLIST (ALPINE TREK ON CLASS 3 TERRAIN)

Alpine Trek on Class 3 Terrain **Performance:**	**Names**									
Maintain Personal Hiking Rhythm										
Maintain a constant breathing rate and controlling speed.										
Movement Skills										
Ascend hills using effective technique.										
Descend hills using effective technique.										
Prepare a Route Card										
Identify the start and end points.										
Select the best route.										
Identify the magnetic bearing in the direction of travel.										
Identify features along the route.										
Identify the distance of the leg of travel.										
Identify the time until completion and the elevation gain / loss.										
Lead the group to the end of one leg along the route.										
Follow Daily Routine										
Follow arrival routine by collectively cooking meal, erecting tents, and organizing area.										
Follow departure routine by collectively striking tents organizing equipment, and following principles of Leave No Trace.										
Overall Skill Assessment										

Individual Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The skill was not attempted or not completed, even with assistance.	The skill was completed with great difficulty / assistance.	The skill was completed without difficulty / minimal assistance.	The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Overall Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The cadet has not achieved the performance standard by not completing at least two of the required skills.	The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete.	The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing eight or more skills without difficulty / exceeded the standard.	The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on eight or more objectives.

COMMENTS

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Assessor's Name: _____ Assessor's signature:_____

ANNEX B, APPENDIX 3

S425 PC

ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions, S425 PC Self-Assessment Questionnaire, Assessment Check List (Apply the Competencies of an Outdoor Leader [OL] During Outdoor Adventure Activities [OAAs]) and become familiar with the material prior to conducting the assessment.

Make double-sides photocopies of the 425 PC Self-Assessment Questionnaire (Apply the Competencies of an Outdoor Leader [OL] During Outdoor Adventure Activities [OAAs]) for each cadet to complete a self-assessment.

Photocopy the S425 PC Assessment Checklist (Apply the Competencies of an Outdoor Leader [OL] During Outdoor Adventure Activities [OAA]) for each cadet.

Obtain all resources required for the assessment.

PRE-ASSESSMENT ASSIGNMENT

Have the cadet review the assessment activity instructions and the assessment tools to become familiar with the material prior to participating in the activity.

ASSESSMENT METHOD

Personal communication was chosen as it allows the assessor to evaluate the cadet's performance through a discussion based on assessment provided through self-assessment while in the position of a team leader.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this PC is to assess the cadet’s ability to critically reflect on their experiences as a team leader and their ability to apply a specific competency of an OL during their leadership assignment.

RESOURCES

- S425 PC Assessment Checklist,
- S425 PC Self-Assessment Questionnaire,
- Journal, and
- Pencil.

ASSESSMENT ACTIVITY LAYOUT

The assessment will be conducted following the team debriefing after each cycle.

ASSESSMENT ACTIVITY INSTRUCTIONS

The personal communication assessment tools for S425 PC consist of a questionnaire and a checklist.

The questionnaire is to be completed by the cadet to personally reflect on their performance while in the position of a team leader during one day of the cycle. (If required the assessor can provide the cadet assistance in completing the questionnaire.)

The checklist is to be completed by the assessor following the team debriefing at the end of the cycle. The assessor will make a judgment and indicate (with the appropriate letter designation) on the corresponding skill whether it was:

- **Incomplete.** The skill was not attempted or not completed even with assistance; or
- **Completed.** The skill was completed without difficulty / required minimal assistance from the assessor.

1. Have the cadet complete the Self-Assessment Questionnaire (Apply the Competencies of an Outdoor Leader [OL] During Outdoor adventure Activities [OAAs]) at the end of each day of training.
2. Have the cadet complete an entry in their journal, critically reflecting on:
   a. incidents where the application of the assigned competency lead to a positive experience for the participants;
   b. incidents where the application of the assigned competency could have created a more positive experience for participants;
   c. how they, when in the role of an OL, would apply the competency to OAAs;
   d. incidents where other competencies were applied; and
   e. incidents where other competencies could have been applied.
3. Conduct a team debriefing where, in a positive manner, the cadets will:
   a. discuss events that happened throughout the cycle;
   b. incidents where the application of the assigned competency, lead to a positive experience for the participants;
   c. incidents where the application of the assigned competency could have created a more positive experience for participants; and
   d. how they, when in the role of an OL, would apply the competency to OAAs.
4. Using the Self Assessment Questionnaire, the assessor shall complete the Assessment Checklist.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the 425 PC Assessment Checklist as:

   a. **Incomplete.** The cadet has not achieved the performance standard by not completing all the required skills; or

   b. **Completed.** The cadet has achieved the performance standard by completing all the required skills.

2. Sign and date the Assessment Checklist.

3. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss overall performance results with the cadet following the team debriefing at the end of the cycle.

425 PC SELF-ASSESSMENT QUESTIONNAIRE (APPLY THE COMPETENCIES OF AN OUTDOOR LEADER [OL] DURING OUTDOOR ADVENTURE ACTIVITIES [OAAs])

Team Leader's Name: _____ Platoon: _____

(1) Outline an event when as the team leader you had trouble applying the assigned competency.

_____

_____

_____

_____

(2) Did your difficulty in applying this competency affect your team members? If so how?

_____

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(3) What could be done in the future to better apply this competency in a more effective manner?

_____

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_____

(4) Do you believe this is an important competency for an OL? Why?

_____

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_____

(5) In what instance did you effectively apply this competency?

_____

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(6) How did your team react to your application of this competency?

(7) Was this an easy competency to integrate into the cycle? Why or why not?

S425 PC ASSESSMENT CHECKLIST (APPLY THE COMPETENCIES OF AN OUTDOOR LEADER [OL] DURING OUTDOOR ADVENTURE ACTIVITIES [OAAs])

Cadet's Name: _____Assessor's Name:_____

	Incomplete	Completed
Personal Communication Assessment:	The skill was not attempted or not completed, even with assistance.	The skill was completed.
Apply the Competency of an Outdoor Leader During Outdoor Adventure Activities		
The cadet critically reflected on at least one positive application of the assigned competency of an OL.		
The cadet critically reflected on at least one negative application of the assigned competency of an OL.		
The cadet provided at least one suggestion on how the negative occurrence could have been avoided.		

Assessor's Feedback:

	PO 425 Overall Assessment							
Check One	**Incomplete**		**Completed With Difficulty**		**Completed**		**Exceeded the Standard**	
Overall Performance	The cadet has not achieved the performance standard by not completing all the required skills.				The cadet has achieved the performance standard by completing all the required skills.			

Assessor's Name: _____ Assessor's Signature:_____

ANNEX B, APPENDIX 4
452.02 EC
ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions and 452.02 EC Assessment Checklist and the material prior to conducting the assessment.

Obtain all resources required for the assessment.

PRE-ASSESSMENT ASSIGNMENT

Have the cadet review the 452.02 EC Assessment Worksheet, instructions and the material prior to participating in the assessment.

ASSESSMENT METHOD

Performance assessment was chosen to observe the cadet performing the required skills and make a judgement on the quality of the performance of mountain bike repairs.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this EC is to assess the cadet's ability to perform mountain bike repairs.

RESOURCES

- 452 EC Checklist,
- Fully equipped mountain bike, and
- Mountain bike repair kit.

ASSESSMENT ACTIVITY LAYOUT

This assessment will be conducted:

- during EO S452.02 (Repair a Mountain Bike),
- during EO S452.03 (Perform Mountain Biking on Novice Trails), and
- during EO S452.04 (Perform Mountain Biking Skills on Intermediate Trails).

ASSESSMENT ACTIVITY INSTRUCTIONS

Assessment checklist should be filled out near the end of the cycle. Observe each cadet and make notes on their progress. Make a judgment and indicate (by placing the appropriate letter in each box) on the Assessment Checklist whether the task was:

- **Incomplete (I).** The skill was not attempted or not completed even with assistance.
- **Completed with difficulty (D).** The skill was completed with great difficulty / assistance.
- **Completed without difficulty (C).** The skill was completed without difficulty / minimal assistance.
- **Exceeded standard (E).** The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Make notes of observations for the purposes of providing descriptive post-assessment feedback.

1. Have the cadet complete mountain bike repairs.
2. Assess the cadet's performance for each skill and record the results on the Assessment Checklist. (Note. This assessment is very subjective. There will be many opportunities for the cadets to complete these skills. Cadets may be given unlimited re-tests within the resources of the CSTC to meet the standard for each skill. Where time permits, cadets may re-test to improve their results.)
3. Provide feedback to the cadet and make note of their progress for each skill on the comments section of the assessment checklist.
4. Assess the cadet's performance for each skill at the end of the cycle and record the results on the Assessment Checklist.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the S452.02 EC Assessment Checklist as:
   a. **Incomplete (I).** The cadet has not achieved the performance standard by not completing at least two of the required skills;
   b. **Completed with difficulty (D).** The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete;
   c. **Completed without difficulty (C).** The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing eight or more skills without difficulty / exceeded the standard; or
   d. **Exceeded standard (E).** The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on eight or more skills.
2. Total all letters attributed in each column and assign a letter value to the overall skill assessment.
3. Sign and date the Assessment Checklist.

4. Ensure a copy of the Assessment Checklist is attached to the cadet's training file.

5. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss the performance results of each section of the Assessment Checklist with the cadet.

Discuss the overall performance result with the cadet.

S452.02 EC ASSESSMENT CHECKLIST (REPAIR A MOUNTAIN BIKE)

Repair a Mountain Bike **Performance:**	**Names**									
Repair a Chain										
Split a chain.										
Rejoin a chain.										
Adjust a Mechanical Disk Brake										
Check / regulate the tension in the brake cable using the barrel-adjusters.										
Check / regulate the tension in the brake cable using the cable clamp bolt.										
Check / reposition the inner (stationary) pad.										
Adjust derailleurs										
Check / adjust the high and low limit screws.										
Check / tension the gear cable.										
Repair a Flat Tire										
Remove the tire from the rim.										
Patch or replace the tube.										
Replace the tire on the rim.										
Replace a Cable										
Replace the brake cable.										
Replace the derailleur cable.										
Overall Skill Assessment										

Individual Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The skill was not attempted or not completed, even with assistance.	The skill was completed with great difficulty / assistance.	The skill was completed without difficulty / minimal assistance.	The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Overall Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The cadet has not achieved the performance standard by not completing at least two of the required skills.	The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete.	The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing eight or more skills without difficulty / exceeded the standard.	The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on eight or more skills.

COMMENTS

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Assessor's Name: _____ Assessor's signature:_____

ANNEX B, APPENDIX 5

S452 PC

ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions and S452 PC Assessment Checklist and become familiar with the material prior to conducting the assessment.

There is no time allotted for this PC. It is to be administered during EO S452.03 (Perform Mountain Biking Skills on Novice Terrain) and EO S452.04 (Perform Mountain Biking Skills on Intermediate Trails).

Photocopy the S452 PC Assessment Checklist.

Obtain all resources required for the assessment.

PRE-ASSESSMENT ASSIGNMENT

Have the cadet review the assessment activity instructions and the S452 PC Assessment Checklist to become familiar with the material prior to participating in the assessment.

ASSESSMENT METHOD

Performance assessment was chosen to observe the cadet performing mountain biking skills on novice and intermediate trails.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this PC is to assess the cadet's ability to perform mountain biking skills on novice and intermediate trails.

RESOURCES

- S452 PC Assessment Checklist,
- Fully equipped mountain bike, and
- Helmet.

ASSESSMENT ACTIVITY LAYOUT

This assessment will be conducted at any time during EO S452.03 (Perform Mountain Biking Skills on Novice Trails) and EO S452.04 (Perform Mountain Biking Skills on Intermediate Trails).

ASSESSMENT ACTIVITY INSTRUCTIONS

This PC is ongoing throughout the cycle. The assessor will be required to observe the cadets in their group during the conduct of the mountain biking cycle and use the Assessment Checklist to monitor their performance.

Assessment checklist should be filled out near the end of the cycle. Observe each cadet and make notes on their progress. Make a judgment and indicate (by placing the appropriate letter in each box) on the Assessment Checklist whether the task was:

- **Incomplete (I).** The skill was not attempted or not completed even with assistance.
- **Completed with difficulty (D).** The skill was completed with great difficulty / assistance.
- **Completed without difficulty (C).** The skill was completed without difficulty / minimal assistance.
- **Exceeded standard (E).** The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Make notes of observations for the purposes of providing descriptive post-assessment feedback.

To ensure a safe environment, the cadet shall be afforded two safety-related warnings while completing this assessment. On the third warning they shall be assessed as incomplete on the PO and a note shall be made in the feedback section. Warnings shall be issued for failure to adhere to the safety principles taught. When a warning is given, clearly identify what the cadet has done, what steps they need to take to correct the error, and what action they should take in the future to avoid the error.

1. Provide several opportunities for the cadet to perform each skill.
2. Provide feedback to the cadet and make note of their progress for each skill on the comments section of the assessment checklist.
3. Assess the cadet's performance for each skill at the end of the cycle and record the results on the Assessment Checklist.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the S452 PC Assessment Checklist as:
   a. **Incomplete (I).** The cadet has not achieved the performance standard by not completing at least two of the required skills;
   b. **Completed with difficulty (D).** The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete;
   c. **Completed without difficulty (C).** The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing seven or more skills without difficulty / exceeded the standard; or
   d. **Exceeded standard (E).** The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on seven or more skills.
2. Total all letters attributed in each column and assign a letter value to the overall skill assessment.
3. Sign and date the Assessment Checklist.

4. Ensure a copy of the Assessment Checklist is attached to the cadet's training file.

5. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss the performance results of each section of the Assessment Checklist with the cadet.

Discuss the overall performance result with the cadet.

S452 PC ASSESSMENT CHECKLIST (RIDE A MOUNTAIN BIKE)

Ride a Mountain Bike **Performance:**	**Names**									
Mountain Bike Safety										
Fit a mountain bike.										
Complete a pre-ride bike check.										
Mountain Biking Skills on Novice Trails										
Brake by applying equal pressure on both brake levers										
Shift gears in preparation to ascend / descend a hill.										
Ascend a hill using proper technique.										
Execute a controlled descent of a hill using proper braking techniques.										
Mountain Biking Skills on Intermediate Trails										
Ascend a hill using proper technique.										
Execute a controlled descent of a hill using proper braking techniques.										
Perform a log hop over a piece of wood or rock 3–5 cm high.										
Steer a mountain bike around a corner by plotting the line, controlling the speed and looking ahead.										
Overall Skill Assessment										

Individual Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The skill was not attempted or not completed, even with assistance.	The skill was completed with great difficulty / assistance.	The skill was completed without difficulty / minimal assistance.	The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Overall Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The cadet has not achieved the performance standard by not completing at least two of the required skills.	The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete.	The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing seven or more skills without difficulty / exceeded the standard.	The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on seven or more skills.

COMMENTS

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Assessor's Name: _____ Assessor's signature:_____

ANNEX B, APPENDIX 6
S453A PC
ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions and S453A PC Assessment Checklist and become familiar with the material prior to conducting the assessment.

There is no time allotted for this PC. It is to be administered during EO S453A.03 (Paddle a Canoe on Moving Water).

Photocopy the S453A PC Assessment Checklist.

Obtain all resources required for the assessment.

PRE-ASSESSMENT ASSIGNMENT

Have the cadet review the assessment activity instructions and the S453A PC Assessment Checklist to become familiar with the material prior to participating in the assessment.

ASSESSMENT METHOD

Performance assessment was chosen to observe the cadet manoeuvring a canoe on moving water.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this PC is to assess the cadet's ability to manoeuvre a canoe on moving water.

RESOURCES

- S453A PC Assessment Checklist,
- Fully equipped canoe,
- Helmet,
- Paddle, and
- Personal floatation device (PFD).

ASSESSMENT ACTIVITY LAYOUT

This assessment will be conducted during EO S453A.03 (Paddle a Canoe on Moving Water).

ASSESSMENT ACTIVITY INSTRUCTIONS

This PC is ongoing throughout the cycle. The assessor will be required to observe the cadets in their group during the conduct of the canoeing cycle and use the Assessment Checklist to monitor their performance.

Assessment checklist should be filled out near the end of the cycle. Observe each cadet and make notes on their progress. Make a judgment and indicate (by placing the appropriate letter in each box) on the Assessment Checklist whether the task was:

- **Incomplete (I).** The skill was not attempted or not completed even with assistance.
- **Completed with difficulty (D).** The skill was completed with great difficulty / assistance.
- **Completed without difficulty (C).** The skill was completed without difficulty / minimal assistance.
- **Exceeded standard (E).** The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Make notes of observations for the purposes of providing descriptive post-assessment feedback.

To ensure a safe environment, the cadet shall be afforded two safety-related warnings while completing this assessment. On the third warning they shall be assessed as incomplete on the PO and a note shall be made in the feedback section. Warnings shall be issued for failure to adhere to the safety principles taught. When a warning is given, clearly identify what the cadet has done, what steps they need to take to correct the error, and what action they should take in the future to avoid the error.

1. Provide several opportunities for the cadet to perform each skill.
2. Provide feedback to the cadet and make note of their progress for each skill on the comments section of the assessment checklist.
3. Assess the cadet's performance for each skill at the end of the cycle and record the results on the Assessment Checklist.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the S453A PC Assessment Checklist as:
   a. **Incomplete (I).** The cadet has not achieved the performance standard by not completing at least two of the required skills;
   b. **Completed with difficulty (D).** The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete;
   c. **Completed without difficulty (C).** The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing seven or more skills without difficulty / exceeded the standard; or
   d. **Exceeded standard (E).** The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on seven or more skills.
2. Total all letters attributed in each column and assign a letter value to the overall skill assessment.
3. Sign and date the Assessment Checklist.

4. Ensure a copy of the Assessment Checklist is attached to the cadet's training file.

5. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss the performance results of each section of the Assessment Checklist with the cadet.

Discuss the overall performance result with the cadet.

S453A PC ASSESSMENT CHECKLIST (MANOEUVRE A CANOE ON MOVING WATER)

Manoeuvre a Canoe on Moving Water **Performance:**	**Names**									
Carry Out Immediate Action on Capsizing										
Execute a self rescue.										
Act as downstream safety by talking, reaching and throwing.										
Scout a Set of Rapids										
Identify the class of the rapids.										
Identify the hazards.										
Select a route through the rapids.										
Identify the safest shoreline.										
Identify downstream safety locations.										
Manoeuvre a Canoe on Moving Water										
Execute an eddy turn as the stern paddler.										
Execute an eddy turn as the bow paddler.										
Execute an upstream ferry as the stern paddler.										
Execute an upstream ferry as the bow paddler.										
Overall Skill Assessment										

Individual Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The skill was not attempted or not completed, even with assistance.	The skill was completed with great difficulty / assistance.	The skill was completed without difficulty / minimal assistance.	The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Overall Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The cadet has not achieved the performance standard by not completing at least two of the required skills.	The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete.	The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing seven or more skills without difficulty / exceeded the standard.	The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on seven or more skills.

COMMENTS

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Assessor's Name: _____ Assessor's signature:_____

ANNEX B, APPENDIX 7
S453B PC
ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions and S453B PC Assessment Checklist and become familiar with the material prior to conducting the assessment.

There is no time allotted for this PC. It is to be administered during EO S453B.03 (Paddle a Kayak on Moving Water).

Photocopy the S453B PC Assessment Checklist.

Obtain all resources required for the assessment.

PRE-ASSESSMENT ASSIGNMENT

Have the cadet review the assessment activity instructions and the S453B PC Assessment Checklist to become familiar with the material prior to participating in the assessment.

ASSESSMENT METHOD

Performance assessment was chosen to observe the cadet manoeuvring a kayak on moving water.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this PC is to assess the cadet's ability to manoeuvre a kayak on moving water.

RESOURCES

- S453B PC Assessment Checklist,
- Fully equipped kayak,
- Helmet,
- Paddle, and
- Personal floatation device (PFD).

ASSESSMENT ACTIVITY LAYOUT

This assessment will be conducted during EO S453B.03 (Paddle a Kayak on Moving Water).

ASSESSMENT ACTIVITY INSTRUCTIONS

This PC is ongoing throughout the cycle. The assessor will be required to observe the cadets in their group during the conduct of the kayaking cycle and use the Assessment Checklist to monitor their performance.

Assessment checklist should be filled out near the end of the cycle. Observe each cadet and make notes on their progress. Make a judgment and indicate (by placing the appropriate letter in each box) on the Assessment Checklist whether the task was:

- **Incomplete (I).** The skill was not attempted or not completed even with assistance.
- **Completed with difficulty (D).** The skill was completed with great difficulty / assistance.
- **Completed without difficulty (C).** The skill was completed without difficulty / minimal assistance.
- **Exceeded standard (E).** The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Make notes of observations for the purposes of providing descriptive post-assessment feedback.

To ensure a safe environment, the cadet shall be afforded two safety-related warnings while completing this assessment. On the third warning they shall be assessed as incomplete on the PO and a note shall be made in the feedback section. Warnings shall be issued for failure to adhere to the safety principles taught. When a warning is given, clearly identify what the cadet has done, what steps they need to take to correct the error, and what action they should take in the future to avoid the error.

1. Provide several opportunities for the cadet to perform each skill.
2. Provide feedback to the cadet and make note of their progress for each skill on the comments section of the assessment checklist.
3. Assess the cadet's performance for each skill at the end of the cycle and record the results on the Assessment Checklist.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the S453B PC Assessment Checklist as:
   a. **Incomplete (I).** The cadet has not achieved the performance standard by not completing at least two of the required skills;
   b. **Completed with difficulty (D).** The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete;
   c. **Completed without difficulty (C).** The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing six or more skills without difficulty / exceeded the standard; or
   d. **Exceeded standard (E).** The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on six or more skills.
2. Total all letters attributed in each column and assign a letter value to the overall skill assessment.
3. Sign and date the Assessment Checklist.

4. Ensure a copy of the Assessment Checklist is attached to the cadet's training file.

5. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss the performance results of each section of the Assessment Checklist with the cadet.

Discuss the overall performance result with the cadet.

S453B PC ASSESSMENT CHECKLIST (MANOEUVER A KAYAK ON MOVING WATER)

Manoeuvre a Kayak on Moving Water **Performance:**	**Names**									
Carry Out Immediate Action on Capsizing										
Perform a wet exit and swim to the safest shoreline.										
Act as downstream safety by talking, reaching and throwing.										
Scout a Set of Rapids										
Identify the class of the rapids.										
Identify the hazards.										
Select a route through the rapids.										
Identify the safest shoreline.										
Identify downstream safety locations.										
Manoeuvre a Kayak on Moving Water										
Execute an eddy turn.										
Execute an upstream.										
Overall Skill Assessment										

Individual Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The skill was not attempted or not completed, even with assistance.	The skill was completed with great difficulty / assistance.	The skill was completed without difficulty / minimal assistance.	The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Overall Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The cadet has not achieved the performance standard by not completing at least two of the required skills.	The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete.	The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing six or more skills without difficulty / exceeded the standard.	The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on six or more skills.

COMMENTS

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Assessor's Name: _____ Assessor's signature:_____

ANNEX B, APPENDIX 8

S454 PC

ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions and S454 PC Assessment Checklist and become familiar with the material prior to conducting the assessment.

There is no time allotted for this PC. It is to be administered during EO S454.02 (Perform Rock Climbing Skills While Bouldering), EO S454.03 (Climb a Natural Rock Face) and EO S454.04 (Perform a Multi-Pitch Climb).

Photocopy the S454 PC Assessment Checklist.

Obtain all resources required for the assessment.

PRE-ASSESSMENT ASSIGNMENT

Have the cadet review the assessment activity instructions and the S454 PC Assessment Checklist to become familiar with the material prior to participating in the assessment.

ASSESSMENT METHOD

Performance assessment was chosen to observe the cadet while performing rock climbing skills.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this PC is to assess the cadet's ability to perform rock climbing skills.

RESOURCES

- S454 PC Assessment Checklist,
- Helmet,
- Sit harness,
- Climbing shoes,
- Chalk,
- Belay device,
- Locking aluminum carabiners, and
- Activity equipment.

ASSESSMENT ACTIVITY LAYOUT

The assessment will be conducted during EO S454.02 (Perform Rock Climbing Skills While Bouldering), EO S454.03 (Climb a Natural Rock Face) and EO S454.04 (Perform a Multi-Pitch Climb).

ASSESSMENT ACTIVITY INSTRUCTIONS

This PC is ongoing throughout the cycle. The assessor will be required to observe the cadets in their group during the conduct of the climbing cycle and use the Assessment Checklist to monitor their performance.

Assessment checklist should be filled out near the end of the cycle. Observe each cadet and make notes on their progress. Make a judgment and indicate (by placing the appropriate letter in each box) on the Assessment Checklist whether the task was:

- **Incomplete (I).** The skill was not attempted or not completed even with assistance.
- **Completed with difficulty (D).** The skill was completed with great difficulty / assistance.
- **Completed without difficulty (C).** The skill was completed without difficulty / minimal assistance.
- **Exceeded standard (E).** The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Make notes of observations for the purposes of providing descriptive post-assessment feedback.

To ensure a safe environment, the cadet shall be afforded two safety-related warnings while completing this assessment. On the third warning they shall be assessed as incomplete on the PO and a note shall be made in the feedback section. Warnings shall be issued for failure to adhere to the safety principles taught. When a warning is given, clearly identify what the cadet has done, what steps they need to take to correct the error, and what action they should take in the future to avoid the error.

1. Provide several opportunities for the cadet to perform each skill.
2. Provide feedback to the cadet and make note of their progress for each skill on the comments section of the assessment checklist.
3. Assess the cadet's performance for each skill at the end of the cycle and record the results on the Assessment Checklist.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the S454 PC Assessment Checklist as:
   a. **Incomplete (I).** The cadet has not achieved the performance standard by not completing at least two of the required skills;
   b. **Completed with difficulty (D).** The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete;

c. **Completed without difficulty (C).** The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing seven or more skills without difficulty / exceeded the standard; or

d. **Exceeded standard (E).** The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on seven or more skills.

2. Total all letters attributed in each column and assign a letter value to the overall skill assessment.

3. Sign and date the Assessment Checklist.

4. Ensure a copy of the Assessment Checklist is attached to the cadet's training file.

5. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss the performance results of each section of the Assessment Checklist with the cadet.

Discuss the overall performance result with the cadet.

S454 PC ASSESSMENT CHECKLIST (CLIMB A NATURAL ROCK FACE)

Climb a Natural Rock Face **Performance:**	**Names**									
Perform Rock Climbing skills										
Deliver and respond to climbing commands.										
Tie into the belay line.										
Perform Safety Checks										
As the belayer, checking the climber.										
As the climber, checking the belayer.										
Climb a Natural Rock Face										
Climb with effective movements and hand and foot holds.										
Belay safely and effectively.										
Perform Multi Pitch Ground Training										
Belay the lead climber.										
Employ effective rope management.										
Secure to the anchor point.										
Remove climbing protection from the rock face.										
Overall Skill Assessment										

Individual Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The skill was not attempted or not completed, even with assistance.	The skill was completed with great difficulty / assistance.	The skill was completed without difficulty / minimal assistance.	The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Overall Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The cadet has not achieved the performance standard by not completing at least two of the required skills.	The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete.	The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing seven or more skills without difficulty / exceeded the standard.	The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on seven or more skills.

COMMENTS

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Assessor's Name: _____ Assessor's signature:_____

ANNEX B, APPENDIX 9

S455 PC

ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions and S455 PC Assessment Checklist and become familiar with the material prior to conducting the assessment.

There is no time allotted for this PC. It is to be administered during EO S455.02 (Perform Mountaineering Skills) and EO S455.03 (Mountaineer on a Glacier).

Photocopy the S455 PC Assessment Checklist.

Obtain all resources required for the assessment.

PRE-ASSESSMENT ASSIGNMENT

Have the cadet review the assessment activity instructions and the S455 PC Assessment Checklist to become familiar with the material prior to participating in the assessment.

ASSESSMENT METHOD

Performance assessment was chosen to observe the cadet while performing mountaineering skills.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this PC is to assess the cadet's ability to perform mountaineering skills.

RESOURCES

- S455 PC Assessment Checklist,
- Hiking boots,
- Trekking pole,
- Crampons,
- Sit harness,
- 7-mm kernmantle rope,
- Crampons,
- Ice tool,
- Helmet, and
- Activity equipment.

ASSESSMENT ACTIVITY LAYOUT

This assessment will be conducted during EO S455.02 (Perform Mountaineering Skills) and EO S455.03 (Mountaineer on a Glacier).

ASSESSMENT ACTIVITY INSTRUCTIONS

This PC is ongoing throughout the cycle. The assessor will be required to observe the cadets in their group during the conduct of the mountaineering cycle and use the Assessment Checklist to monitor their performance.

Assessment checklist should be filled out near the end of the cycle. Observe each cadet and make notes on their progress. Make a judgment and indicate (by placing the appropriate letter in each box) on the Assessment Checklist whether the task was:

- **Incomplete (I).** The skill was not attempted or not completed even with assistance.
- **Completed with difficulty (D).** The skill was completed with great difficulty / assistance.
- **Completed without difficulty (C).** The skill was completed without difficulty / minimal assistance.
- **Exceeded standard (E).** The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Make notes of observations for the purposes of providing descriptive post-assessment feedback.

To ensure a safe environment, the cadet shall be afforded two safety-related warnings while completing this assessment. On the third warning they shall be assessed as incomplete on the PO and a note shall be made in the feedback section. Warnings shall be issued for failure to adhere to the safety principles taught. When a warning is given, clearly identify what the cadet has done, what steps they need to take to correct the error, and what action they should take in the future to avoid the error.

1. Provide several opportunities for the cadet to perform each skill.
2. Provide feedback to the cadet and make note of their progress for each skill on the comments section of the assessment checklist.
3. Assess the cadet's performance for each skill at the end of the cycle and record the results on the Assessment Checklist.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the S455 PC Assessment Checklist as:

   a. **Incomplete (I).** The cadet has not achieved the performance standard by not completing at least two of the required skills;

   b. **Completed with difficulty (D).** The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete;

   c. **Completed without difficulty (C).** The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing seven or more skills without difficulty / exceeded the standard; or

   d. **Exceeded standard (E).** The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on seven or more skills.

2. Total all letters attributed in each column and assign a letter value to the overall skill assessment.

3. Sign and date the Assessment Checklist.

4. Ensure a copy of the Assessment Checklist is attached to the cadet's training file.

5. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss the performance results of each section of the Assessment Checklist with the cadet.

Discuss the overall performance result with the cadet.

S455 PC ASSESSMENT CHECKLIST (MOUNTAINEER ON A GLACIER)

Mountainer on a Glacier **Performance:**	**Names**									
Perform Mountaineering skills										
Don a sit harness.										
Tie into a roped team.										
Complete a final equipment check.										
Glacier Travel Techniques										
Climb in balance.										
Employ the step kick when climbing an incline.										
Switchback to change direction.										
Plunge-step when descending a decline.										
Down climb using proper technique.										
Self-Arrest with an Ice Tool										
Identify the procedure when falling head uphill on stomach.										
Identify the procedure when falling head uphill on back.										
Team Arrest										
Execute the procedure for a team arrest.										
Overall Skill Assessment										

Individual Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The skill was not attempted or not completed, even with assistance.	The skill was completed with great difficulty / assistance.	The skill was completed without difficulty / minimal assistance.	The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Overall Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The cadet has not achieved the performance standard by not completing at least two of the required skills.	The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete.	The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing seven or more skills without difficulty / exceeded the standard.	The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on seven or more skills.

COMMENTS

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Assessor's Name: _____ Assessor's signature:_____

ANNEX B, APPENDIX 10

S456 PC

ASSESSMENT INSTRUCTIONS

PREPARATION

PRE-ASSESSMENT INSTRUCTIONS

Review the assessment plan, assessment instructions and S456 PC Assessment Checklist and become familiar with the material prior to conducting the assessment.

There is no time allotted for this PC. It is to be administered during EO S456.03 (Ride a Horse on Established Trails).

Photocopy the S456 PC Assessment Checklist.

Obtain all resources required for the assessment.

PRE-ASSESSMENT ASSIGNMENT

Have the cadet review the assessment activity instructions and the S456 PC Assessment Checklist to become familiar with the material prior to participating in the assessment.

ASSESSMENT METHOD

Performance assessment was chosen to observe the cadet while performing horse care and horseback riding skills.

CONDUCT OF ASSESSMENT

PURPOSE

The purpose of this PC is to assess the cadet's ability to perform horse care and horseback riding.

RESOURCES

- S456 PC Assessment Checklist,
- Horse,
- Tack,
- Helmet,
- Boots with heels,
- Saddle bags as required,
- Horse grooming kit, and
- Activity equipment.

ASSESSMENT ACTIVITY LAYOUT

This assessment will be conducted during EO S456.03 (Ride a Horse on Established Trails).

ASSESSMENT ACTIVITY INSTRUCTIONS

This PC is ongoing throughout the cycle. The assessor will be required to observe the cadets in their group during the conduct of the horsebike riding cycle and use the Assessment Checklist to monitor their performance.

Assessment checklist should be filled out near the end of the cycle. Observe each cadet and make notes on their progress. Make a judgment and indicate (by placing the appropriate letter in each box) on the Assessment Checklist whether the task was:

- **Incomplete (I).** The skill was not attempted or not completed even with assistance.
- **Completed with difficulty (D).** The skill was completed with great difficulty / assistance.
- **Completed without difficulty (C).** The skill was completed without difficulty / minimal assistance.
- **Exceeded standard (E).** The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Make notes of observations for the purposes of providing descriptive post-assessment feedback.

To ensure a safe environment, the cadet shall be afforded two safety-related warnings while completing this assessment. On the third warning they shall be assessed as incomplete on the PO and a note shall be made in the feedback section. Warnings shall be issued for failure to adhere to the safety principles taught. When a warning is given, clearly identify what the cadet has done, what steps they need to take to correct the error, and what action they should take in the future to avoid the error.

1. Provide several opportunities for the cadet to perform each skill.
2. Provide feedback to the cadet and make note of their progress for each skill on the comments section of the assessment checklist.
3. Assess the cadet's performance for each skill at the end of the cycle and record the results on the Assessment Checklist.

POST ASSESSMENT INSTRUCTIONS

RECORDING ASSESSMENT RESULTS

1. Indicate the overall performance assessment on the S456 PC Assessment Checklist as:
   a. **Incomplete (I).** The cadet has not achieved the performance standard by not completing at least two of the required skills;
   b. **Completed with difficulty (D).** The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete;

c. **Completed without difficulty (C).** The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing five or more skills without difficulty / exceeded the standard; or

d. **Exceeded standard (E).** The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on five or more skills.

2. Total all letters attributed in each column and assign a letter value to the overall skill assessment.

3. Sign and date the Assessment Checklist.

4. Ensure a copy of the Assessment Checklist is attached to the cadet's training file.

5. The overall result will be recorded on the Leadership and Challenge Qualification Record located at Chapter 3, Annex C.

PROVIDING ASSESSMENT FEEDBACK

Discuss the performance results of each section of the Assessment Checklist with the cadet.

Discuss the overall performance result with the cadet.

S456 PC ASSESSMENT CHECKLIST (RIDE A HORSE ON ESTABLISHED TRAILS)

Ride a Horse on Established Trails **Performance:**	**Names**									
Perform Horse Care Duties										
Groom the horse before and following an activity.										
Feed the horse when required.										
Give the horse water when required.										
Horse Riding Skills										
Approach the horse.										
Tack the horse.										
Mount and dismount a horse effectively.										
Communicate with the horse to have it move forward, stop and turn.										
Remove the tack.										
Overall Skill Assessment										

Individual Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The skill was not attempted or not completed, even with assistance.	The skill was completed with great difficulty / assistance.	The skill was completed without difficulty / minimal assistance.	The skill was completed with enhanced proficiency, in an efficient manner, without error, and without difficulty or assistance.

Overall Skill Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
The cadet has not achieved the performance standard by not completing at least two of the required skills.	The cadet has achieved the performance standard by having one or none of the skills assessed as incomplete.	The cadet has achieved the performance standard by having none of the skills assessed as incomplete and by completing five or more skills without difficulty / exceeded the standard.	The cadet has exceeded the performance standard completing all of the skills without difficulty and by exceeding the standard on five or more skills.

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Assessor's Name: _____ Assessor's signature:_____

ANNEX C

LEADERSHIP AND CHALLENGE QUALIFICATION RECORD

Cadet's Name: _____ Cadet Corps: _____

POs that are evaluated as "Incomplete" or "Completed":

Topic	PO No.	Performance Statement	PO Assessment	
			Incomplete	Completed
Community Service	402	Participate in a Community Service Activity		
First Aid	410	Attain Wilderness First Aid Qualification		

POs that recognize proficiency level achievement:

Topic	PO No.	Performance Statement	PO Assessment			
			Did Not Achieve The Standard	Baseline Proficiency		Enhanced Proficiency
			Incomplete	Completed With Difficulty	Completed Without Difficulty	Exceeded the Standard
Leadership	403	Lead a Team During an Outdoor Adventure Activity				
Trekking	423	Alpine Trek on Class 3 Terrain				
Outdoor Leadership	425	Reflect on the Competencies of an Outdoor Leader				
Mountain Biking	452	Ride a Mountain Bike on Intermediate Trails				
Watermanship	453AB	Manoeuvre a Canoe / Kayak on Moving Water				
Rock Climbing	454	Climb a Natural Rock Face				
Mountaineering	455	Mountaineer on a Glacier				
Horseback Riding	456	Ride a Horse on Established Trails				
Overall Assessment						

Overall Assessment:

I = Incomplete	D = Completed With Difficulty	C = Completed Without Difficulty	E = Exceeded the Standard
Two or more of the required POs were assessed as incomplete.	No more than one PO was assessed as "incomplete" and less than five Pos were completed "without difficulty".	No more than one PO was assessed as "incomplete" and five or more POs were completed "without difficulty" (one of which must be either PO 403 or PO 425).	All POs were completed "without difficulty" with five or more exceeding the standard.

Leadership and Challenge Qualification Achieved	**Yes**			
To qualify for a "yes" the cadet must achieve either letter values "D, C or E"	**No**		Pl Comd Signature:	Date:

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ANNEX D

CADET INTERVIEW GUIDELINES

PREPARATION FOR INITIAL INTERVIEW

PRE-INTERVIEW INSTRUCTIONS

Review the interview guidelines and the cadet interview form in Chapter 3, Annex D, Appendix 1 and become familiar with the material prior to conducting the interview.

Make copies of the course schedule, Assessment of Learning Plan located in Chapter 3, Annex B and associated PC assessment instruments located in the appendices of Chapter 3, Annex B, and make them available to each cadet a day prior to the interview.

Schedule interviews to allow approximately 10–15 minutes per cadet.

PRE-INTERVIEW ASSIGNMENT

Have the cadets review the course objectives, schedule and assessment activities and come to the interview prepared to discuss these aspects of the course and expectations and personal goals they may have for the course.

CONDUCT OF INITIAL INTERVIEW

PURPOSE

The purpose of the initial interview is to discuss course objectives, schedule and assessment activities. This is also an opportunity to get to know the cadet and help the cadet set personal goals.

RESOURCES

- Cadet Interview Form,
- Pen / pencil, and
- Suitable interview location.

INTERVIEW LAYOUT

Set up the interview location so that both the interviewer and cadet will be comfortable.

INTERVIEW INSTRUCTIONS

Tips for a successful interview:

- Ask questions that will provoke thought; in other words avoid questions with a yes or no answer.
- Manage time by ensuring the cadet stays on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadet time to respond to your questions.

1. Have the cadet enter the area of the interview.
2. Ask the cadet the questions on Part 1 of the Cadet Interview Form.
3. Have the cadet sign the Cadet Interview Form, Section 2.
4. Sign the Cadet Interview Form, Section 2.

POST-INTERVIEW INSTRUCTIONS

Meet with each cadet throughout the course to discuss their progress towards achieving the qualification. These feedback interviews should be directly related to the assessment for learning activities outlined within the applicable lesson specifications located in Chapter 4.

PREPARATION FOR FINAL INTERVIEW

PRE-INTERVIEW INSTRUCTIONS

Review the interview guidelines and Cadet Interview Form and become familiar with the material prior to conducting the interview.

Review the cadet's completed Qualification Record and related assessment instruments as well as the completed Section 1 and 2 of the Cadet Interview Form.

Schedule interviews to allow approximately 10–15 minutes per cadet.

PRE-INTERVIEW ASSIGNMENT

Have the cadets review the personal goals they established at the beginning of the course and come to the interview prepared to discuss their success in reaching those goals. Have cadets think about their personal goals for returning to their corps.

CONDUCT OF FINAL INTERVIEW

PURPOSE

The purpose of the final interview is to discuss; the completed Qualification Record, the cadet's goals that were discussed during the initial interview, and new goals for returning to the corps.

RESOURCES

- Cadet Initial Interview Form,
- Pen / pencil; and
- Suitable interview location.

INTERVIEW LAYOUT

Set up the interview location so that both the cadet and the interviewer will be comfortable.

INTERVIEW INSTRUCTIONS

Tips for a successful interview:

- Ask questions that will provoke thought; in other words avoid questions with a yes or no answer.
- Manage time by ensuring the cadet stays on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadet time to respond to your questions.

1. Ask the cadet questions in Section 3 of the Cadet Interview Form.
2. Provide the cadet with a copy of their completed Qualification Record and discuss their learning progress towards course objectives.
3. Ask the cadet the remaining questions on the form.
4. Have the cadet sign the Cadet Interview Form.
5. Sign the Cadet Interview Form.

POST-INTERVIEW INSTRUCTIONS

Ensure the Cadet Certificate of Qualification, CF 558 (NSN 7530-21-870-7685), is awarded to each cadet upon successful completion of the qualification.

Ensure the completed Qualification Record for each cadet is forwarded to the applicable corps, through the appropriate chain of command.

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ANNEX D, APPENDIX 1

CADET INTERVIEW FORM

SECTION 1 – CADET PARTICULARS			
Surname:		Name:	
Course:	Platoon:	Corps:	Rank:

SECTION 2 – INITIAL INTERVIEW	
1. What are your expectations for the course?	ADDITIONAL COMMENTS
2. Do you have any questions of curiosity about the course objectives, schedule and / or assessment of learning activities?	
3. What course activities do you enjoy most?	
4. What are your strengths?	
5. What are some areas you would like to improve during the course? What personal goals would you like to establish while on course?	
6. Do you have any medical conditions / allergies that course staff should be aware of?	
Cadet's Signature:	
Pl Comd Signature:	Date:

SECTION 3 – FINAL INTERVIEW	
1. How did you enjoy the course? 2. What were some of your likes and dislikes about the training activities? Likes: Dislikes: 3. How can you apply what you have learned on this course at your home corps? 4. What are some new personal goals you will establish upon returning to the corps. 5. What training opportunities are you interested in next summer?	ADDITIONAL COMMENTS
Cadet's Signature:	
Pl Comd Signature:	Date:

ANNEX E

TRAINING COUNSELLING SESSION GUIDELINES

PREPARATION

PRE-COUNSELLING SESSION INSTRUCTIONS

Review the counselling instructions and Training Counselling Session Form and become familiar with the material prior to conducting the training counselling session.

CONDUCT OF TRAINING COUNSELLING SESSION

PURPOSE

The purpose of the Training Counselling Session is to formally meet with a cadet who is having difficulty achieving and / or maintaining qualification standards and to create an action plan to assist this cadet.

RESOURCES

- Training Counselling Session Form,
- Pen / pencil, and
- Suitable boardroom.

COUNSELLING SESSION LAYOUT

Set up a table with chairs for the cadet and the staff.

COUNSELLING SESSION INSTRUCTIONS

Tips for a successful interview:

- Ask questions that will provoke thought; in other words avoid questions with a yes or no answer.
- Manage time by ensuring the cadet stays on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadet time to respond to your questions.

1. Have the cadet enter the counselling room.
2. Inform the cadet of the situation; the cadet is not achieving and / or maintaining qualification standards
3. Determine the following:
   a. the seriousness of the failure,
   b. areas of difficulty,
   c. exceptional circumstances affecting the training progress,
   d. the behaviour of the cadet,

e. the effort and motivation of the cadet, and

f. whether or not sufficient training support was provided.

4. Create an action plan with the cadet that addresses the reasons for the failure and the action the cadet should take to be successful.

The action plan must be achievable for the cadet, address the reasons for the failure and provide the cadet with guidelines on the action they must take to be successful.

5. Brief the cadet on the consequences should no improvement be noticed.

6. Have the cadet sign the Training Counselling Form.

7. Sign the Training Counselling Form.

POST-COUNSELLING INSTRUCTIONS

Provide a recommendation to the cadet's staff. The outcome of a training counselling session can lead to the following:

1. recommend continued training with further counselling and retesting following additional instruction;

2. recommend continued training with further counselling and retesting following additional practice; or

3. recommend a Training Review Board.

ANNEX E, APPENDIX 1

TRAINING COUNSELLING SESSION FORM

SECTION 1 – CADET PERS INFORMATION	
Surname:	Name:
CSTC:	Course:
Platoon:	Corps:
Circumstances requiring TCS convening:	

SECTION 2 – SESSION FINDINGS
(To include training progression to date, effort and motivation of cadet, training support provided, exceptional circumstances, etc) Seriousness of failure: Performance in related POs: Previous difficulties and action taken: Overall course performance: Exceptional circumstances affecting training progress: Assessment of the cadet's conduct:

SECTION 3 – SESSION RECOMMENDATIONS (ACTION PLAN)	
❑ Continued training with further counselling and retesting following additional instruction ❑ Continued training with further counselling and retesting following additional practice ❑ Training Review Board (TRB)	
Cadet's Signature:	
Pl Comd's Signature:	Date:
SECTION 4 – Crse O Review	
❑ I agree with the above recommendation ❑ I disagree with the above recommendation Reasons: Alternate course of action:	
Crse O Signature:	Date:

ANNEX F

TRAINING REVIEW BOARD (TRB) GUIDELINES

PREPARATION

PRE-TRB INSTRUCTIONS

Review the TRB instructions and Training Review Board Form in Chapter 3, Annex F, Appendix 1 and become familiar with the material prior to conducting the training review board.

CONDUCT OF TRB

PURPOSE

The purpose of the TRB is to determine the feasibility of continuing the cadet's training.

RESOURCES

- Training Review Board Form,
- Pen / pencil, and
- Suitable boardroom.

TRB INSTRUCTIONS

1. Discuss the following:
   a. progression of training to date,
   b. seriousness of failure,
   c. performance in related POs,
   d. overall course performance,
   e. behaviour assessment of the cadet,
   f. effort and motivation of cadet,
   g. whether or not sufficient training support was provided, and
   h. exceptional circumstances affecting training progression.

The action plan must be achievable for the cadet, address the reasons for the failure and provide the cadet with guidelines on the action they must take to be successful.

2. Have the cadet sign the Training Review Board Form.
3. Sign the Training Review Board Form.

POST-TRB INSTRUCTIONS

1. Provide a recommendation to the DCO. Possible outcomes of a TRB are:

    a. a recommendation of continued training with further counselling and / or a retest following additional instruction / practice;

    b. a recommendation of continued training with a suitable arrangement agreed to by the board members that is in the best interest of all parties; or

    c. a recommendation of RTU to the Commanding Officer.

2. Section 5 and 6 will be completed in cases where a RTU is recommended.

ANNEX F, APPENDIX 1

TRAINING REVIEW BOARD FORM

SECTION 1 – CADET PERS INFORMATION	
Surname:	Name:
CSTC:	Course:
Platoon:	Corps:
Circumstances requiring TRB convening:	

SECTION 2 - BOARD MEMBERS (NAME AND RANK)		
Coy Comd:	Stds Officer:	Crse O:

SECTION 3 – BOARD FINDINGS

(To include training progression to date, effort and motivation of cadet, training support provided, exceptional circumstances, etc)

Seriousness of failure:

Performance in related POs:

Previous difficulties and action taken:

Overall course performance:

Exceptional circumstances affecting training progress:

Assessment of the cadet's conduct:

SECTION 4 – BOARD RECOMMENDATIONS	
Recommendation to the Commanding Officer for: ❑ Continued training with further counselling and/or additional training and an assessment ❑ Other: Recommendation of RTU to the Commanding Officer for: ❑ Unsatisfactory Performance, if the cadet is unlikely to meet the required standard for the course and there is no developmental benefit for the cadet to remain with the course (eg, lack of effort, too far behind, etc) ❑ Disciplinary reasons if the cadet's behaviour is unacceptable. Comments:	
Crse O Signature:	
Stds O Signature:	
Coy Comd Signature:	Date:
SECTION 5 – DEPUTY COMMANDING OFFICER (DCO) RECOMMENDATIONS	
❑ I agree with the above recommendation ❑ I disagree with the above recommendation: Reason: Alternate course of action:	
DCO Signature:	Date:

SECTION 6 – COMMANDING OFFICER DECISION	
❑ I agree with the above recommendation ❑ I disagree with the above recommendation: Reason: Alternate course of action:	
CO Signature:	Date:

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CHAPTER 4

PERFORMANCE OBJECTIVES

SECTION 1

PERFORMANCE OBJECTIVES, TRAINING PLAN AND ON-THE-JOB TRAINING

PURPOSE

1. The purpose of this chapter is to outline the specific POs, Training Plan and On-The-Job (OJT) associated with the Leadership and Challenge qualification.

PERFORMANCE OBJECTIVES

2. POs are a description of the cadet's ability after training is complete. They include a description, in performance terms, of what the individual must do, the conditions under which the performance must be completed, and the standard to which the performance must conform. These three elements are respectively defined as:

a. a performance statement;

b. a conditions statement; and

c. a standard.

TRAINING PLAN

3. This chapter also details the training plan that is designed to assist cadets to achieve the required POs using EOs and Lesson Specifications (LS), which are the key reference used for development of A-CR-CCP-717/PF-001.

ENABLING OBJECTIVES

4. EOs are a description of the cadet's ability after each unit of learning is complete and constitute a major step towards achieving the PO. EOs may correspond to the major components identified in the first round of deconstructing POs or they may result from grouping several related components. They are composed of three essential parts:

a. a performance statement;

b. a conditions statement; and

c. a standard.

LESSON SPECIFICATIONS

5. LSs describe the instructional strategy to be applied to each EO, and include:

a. supporting teaching points;

b. references;

c. learning activities (methods, media and environment);

d. estimated timings;

e. assessment directions; and

f. any remarks that further clarify the design intent.

INSTRUCTIONAL METHODOLOGIES AND THEIR APPLICATION

6. General information including age-appropriateness, definition, application, advantages and disadvantages for the various methods of instruction commonly accepted as appropriate for cadet training are located at Chapter 4, Annex A.

ASSESSMENT FOR LEARNING

7. Formative evaluation, or assessment for learning, takes place during a phase of instruction and helps cadets and instructors recognize progress or lapses in learning. These assessments can also provide cadets with opportunities to practice PCs. This helps to diagnose cadet needs, eg, corrective action or remedial instruction, plan the next steps in instruction and provide cadets with feedback they can use to improve. It also reinforces learning so that it can be retained longer. Details for Leadership and Challenge assessment for learning are outlined within the applicable lesson specifications located at Chapter 4.

OJT–OVERVIEW

8. OJT is a structured yet flexible aspect of training intended to provide the cadet with practical opportunities, outside of their peer group training, to continue developing knowledge and skills in the areas of leadership and instructional techniques.

9. The OJT for Leadership and Challenge will consist of specialty duties – one to two training days.

10. Infusing OJT experiences into each specialty qualification course provides the cadet with an authentic and challenging leadership and instructional experience which better prepares them to perform these duties and apply their specialty knowledge and skills at the corps and at the CSTC during potential staff cadet advanced training opportunities.

11. Although there will be no assessment of learning programmed for OJT, some PCs may be completed during the time allocated to the specialty component of OJT. In such cases, the details are provided in the associated assessment instructions and instruments located at Chapter 3, Annex B.

OJT–SPECIALTY DUTIES

12. This OJT is intended to provide the cadet with a practical leadership and instructional experience unique to their specialty. Although it is not possible to standardize this practical experience for each cadet, details for this OJT are located at Chapter 4, Annex B.

PO S402

1. **Performance**: Participate in a Community Service Activity

2. **Conditions**:

   a. Given:

      (1) Activity equipment as required,

      (2) Supervision, and

      (3) Assistance as required.

   b. Denied: Nil.

   c. Environmental: National / provincial park or training area associated with the CSTC.

3. **Standard**: The cadet will participate in a community service activity that:

   a. provides a direct benefit to a national / provincial park or a training area associated with the CSTC, such as:

      (1) building / repairing trails;

      (2) building bridges / boardwalks;

      (3) creating and erecting trail markers;

      (4) clearing brush;

      (5) landscaping;

      (6) promoting park events;

      (7) assisting with wildlife prevention measures; or

      (8) restoring natural habitats;

   b. promotes the importance of environmental stewardship; and

   c. demonstrates the importance of the individual's responsibility to sustain the environment.

4. **Remarks**:

   a. Initial planning of the community service activity shall occur prior to the arrival of staff and cadets.

   b. Where a park project is selected, the national or provincial park association shall be directly involved in organizing and completing the activity.

   c. In order to facilitate the rotation between cycles, it is recommended that this PO immediately precede or follow the mountain bike cycle.

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PO S403

1. **Performance**: Lead a Team During an Outdoor Adventure Activity (OAA)
2. **Conditions**:
   a. Given:
      (1) Supervision, and
      (2) Assistance as required.
   b. Denied: Nil.
   c. Environmental: Field setting.
3. **Standard**: The cadet will lead a team during an OAA by:
   a. conducting oneself in a professional manner;
   b. attending an initial briefing from platoon staff / guide, to include:
      (1) arriving on time at the designated meeting area;
      (2) taking notes;
      (3) asking questions for clarification, as required; and
      (4) answering confirmation questions, as required;
   c. briefing team members on the next day's activities' specifications and requirements;
   d. implementing morning routine by:
      (1) waking up all team members;
      (2) ensuring campsite routine is adhered to by team members as required, to include:
         (a) striking tents;
         (b) cooking meals;
         (c) replenishing the water supply;
         (d) packing kit;
         (e) erasing signs of occupancy; and
         (f) following any other instructions as detailed by platoon staff / guide;
   e. implementing daily routine by:
      (1) ensuring all team members have assigned equipment;
      (2) ensuring the team meets all timings;
      (3) supervising breaks and meals as required;
      (4) managing conflict within the team as required;
      (5) promoting positive team interactions;

(6) overseeing the maintenance of team equipment, as required, such as:

(a) distributing;

(b) packing;

(c) cleaning; and

(d) drying; and

(7) following any other instructions as detailed by platoon staff / guide; and

f. implementing evening routine by:

(1) ensuring campsite routine is adhered to by team members, as required, to include:

(a) erecting tents;

(b) cooking meals;

(c) replenishing the water supply;

(d) fuelling stoves;

(e) securing food and garbage from animals; and

(f) following any other instructions as detailed by platoon staff / guide;

(2) adhering to the platoon schedule as required; and

(3) debriefing the team on the day's activities by discussing:

(a) what happened during the day;

(b) how the identified events affected team members;

(c) what lessons were learned;

(d) how to apply the lessons learned to future activities;

(e) how the events apply to the assigned competency of an outdoor leader (OL); and

(f) how the events apply to the other competencies of an OL; and

g. completing journal entries to reflect on their experiences, challenges and achievements during the leadership assignment.

4. **Remarks**:

a. Platoon staff shall model the process of leading a team on the first day of training.

b. Each cadet shall be given an opportunity (two if required) to lead a team during the first two cycles (or third as required) of training and receive an assessment for learning, with a debriefing by platoon staff.

c. The assessment of learning shall occur during the last four (or three as required) cycles of training. It is recommended that this occur during an overnight activity.

EO S403.01

1. **Performance**: Describe the Duties of a Team Leader During an Outdoor Adventure Activity

2. **Conditions**:

   a. Given:

      (1) Supervision, and

      (2) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall describe the duties of a team leader during an outdoor adventure activity, to include:

   a. conducting oneself in a professional manner;

   b. attending an initial briefing from platoon staff / guide, to include:

      (1) arriving on time at the designated meeting area;

      (2) taking notes;

      (3) asking questions for clarification, as required; and

      (4) answering confirmation questions, as required;

   c. briefing team members on the next day's activities' specifications and requirements;

   d. implementing morning routine by:

      (1) waking up all team members;

      (2) ensuring campsite routine is adhered to by team members, as required, to include:

         (a) striking tents;

         (b) cooking meals;

         (c) replenishing the water supply;

         (d) packing kit;

         (e) erasing signs of occupancy; and

         (f) following any other instructions as detailed by platoon staff / guide;

   e. implementing daily routine by:

      (1) ensuring all team members have assigned equipment;

      (2) ensuring the team meets all timings;

      (3) supervising breaks and meals, as required;

      (4) managing conflict within the team, as required;

      (5) promoting positive team interactions;

(6) overseeing the maintenance of team equipment as required, such as:

(a) distributing;

(b) packing;

(c) cleaning; and

(d) drying; and

(7) following any other instructions as detailed by platoon staff / guide;

f. implementing evening routine by:

(1) ensuring campsite routine is adhered to by team members, as required, to include:

(a) erecting tents;

(b) cooking meals;

(c) replenishing the water supply;

(d) fuelling stoves;

(e) securing food and garbage away from animals; and

(f) following any other instructions as detailed by platoon staff / guide;

(2) adhering to the platoon schedule as required; and

(3) debriefing the team on the day's activities by discussing:

(a) what happened during the day;

(b) how the identified events affected team members;

(c) what lessons were learned;

(d) how to apply the lessons learned to future activities;

(e) how the events apply to the assigned competency of an outdoor leader (OL); and

(f) how the events apply to the other competencies of an OL.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Discuss attending an initial briefing, to include: a. arriving on time at the designated meeting area; b. taking notes; c. asking questions for clarification, as required; and d. answering confirmation questions, as required.	Interactive Lecture	5 min	C2-109 (p. 119)

TP	Description	Method	Time	Refs
TP2	Discuss the process to brief team members, to include: a. outlining the scheduled activities for the day; b. identifying timings for the day; c. setting goals for the day; and d. outlining safety guidelines, as required.	Interactive Lecture	5 min	C2-109 (p. 50)
TP3	Discuss how to facilitate: a. morning routine, to include: (1) waking up all team members; and (2) ensuring campsite routine is adhered to by team members, as required, to include: (a) striking tents; (b) cooking meals; (c) replenishing the water supply; (d) packing kit; (e) erasing signs of occupancy; and (f) following any other instructions as detailed by platoon staff / guide; b. daily routine, to include: (1) ensuring all team members have assigned equipment; (2) ensuring the team meets all timings; (3) supervising breaks and meals, as required; (4) managing conflict within the team, as required; (5) promoting positive team interactions; and (6) overseeing the maintenance of team equipment, as required, such as: (a) distributing; (b) packing; (c) cleaning; and (d) drying; and	Group Discussion	10 min	C2-011 (p. 52–55) C2-051 (p. 98–100)

TP	Description	Method	Time	Refs
	c. evening routine, to include: (1) ensuring campsite routine is adhered to by team members, as required, to include: (a) erecting tents; (b) cooking meals; (c) replenishing the water supply; (d) fuelling stoves; (e) securing food and garbage away from animals; and (f) following any other instructions as detailed by platoon staff / guide; (2) adhering to the platoon schedule, as required; (3) scheduling a minimum of 10 minutes for team members to complete a journal entry; and (4) debriefing the team on the day's activities.			
TP4	Identify the process to debrief team members by discussing: a. events that occurred throughout the day; b. how the events affected team members; c. lessons learned; d. how to apply the lessons learned to future activities; e. how the events apply to the assigned competency of an OL; and f. how the events apply to the other competencies of an OL.	Interactive Lecture	5 min	C2-034 (pp. 194–199) C2-109 (p. 13)
TP5	Conduct a group discussion to review the assessment information and assessment form.	Group Discussion	10 min	

5. **Time**:

a.	Introduction / Conclusion:	5 min
b.	Interactive Lecture:	15 min
c.	Group Discussion:	20 min
d.	Total:	40 min

6. **Substantiation**:

   a. An interactive lecture was chosen for TPs 1, 2 and 4 to orient the cadets to receiving an initial briefing, and briefing and debriefing team members.

   b. A group discussion was chosen for TPs 3 and 5 as it allows the cadets to interact with their peers and share their knowledge and experiences about facilitating morning, daily and evening routines and leadership assessment. This helps develop a rapport by allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

7. **References**:

   a. C2-011 ISBN 0-89886-910-2 McGivney, A. (2003). *Leave no trace: A guide to the new wilderness etiquette* (2nd ed.). Seattle, WA: The Mountaineers Books.

   b. C2-034 ISBN 0-87322-637-2 Priest, S., & Gass, M. (1997). *Effective leadership in adventure programming*. Windsor, ON: Human Kinetics.

   c. C2-051 ISBN 978-0-7153-2254-3 Bagshaw, C. (2006). *The ultimate hiking skills manual*. Cincinatti, Ohio: David & Charles.

   d. C2-109 ISBN 0-7872-6561-6 Sugarman, D., Doherty, K., Garvey, D., & Gass, M. (2000). *Reflective learning: Theory and practice*. Dubuque, IO: Kendall / Hunt Publishing Company.

8. **Training Aids**:

   a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area, and

   b. Leadership assessment instructions and assessment form, located at Chapter 3, Annex B.

9. **Learning Aids**: Leadership assessment instructions and assessment form, located at Chapter 3, Annex B.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 1, S403 PC.

11. **Remarks**:

   a. This lesson shall be conducted prior to the start of Cycle One.

   b. Cadets will complete journal entries to reflect on their experiences, challenges and achievements during the leadership assignment.

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PO S410

1. **Performance**: Attain Wilderness First Aid Qualification

2. **Conditions**:

   a. Given:

      (1) Supervision, and

      (2) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Field setting.

3. **Standard**: IAW the standards and policies of the wilderness first aid provider, the cadet will perform wilderness first aid.

4. **Remarks**:

   a. For scheduling purposes, a total of 16 periods (two training days) has been allocated for wilderness first aid training. The actual course duration and hours shall be specified by the service provider. The Course Officer will be required to schedule some of this training outside of training hours.

   b. Wilderness first aid training shall be conducted by a nationally recognized first aid training provider.

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PO S423

1. **Performance**: Alpine Trek on Class 3 Terrain

2. **Conditions**:

   a. Given:

      (1) Hiking boots,

      (2) Trekking poles,

      (3) Activity equipment,

      (4) Personal equipment,

      (5) Group equipment,

      (6) Supervision, and

      (7) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Class 3 terrain IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours.

3. **Standard**: The cadet will trek on Class 3 terrain, to include:

   a. maintaining personal hiking rhythm by:

      (1) maintaining a consistent breathing rate; and

      (2) controlling speed;

   b. ascending hills by:

      (1) adjusting stride by taking small steps;

      (2) maintaining centre of gravity by leaning forward; and

      (3) using the trekking poles to help maintain balance and minimize strain on the body;

   c. descending hills by:

      (1) adjusting stride by taking small steps;

      (2) bending the knees to cushion the shock;

      (3) placing the feet lightly on the ground;

      (4) maintaining centre of gravity by leaning back; and

      (5) using the trekking poles to help maintain balance and minimize strain on the body;

   d. navigating using a route card, as a leader of a group of no more than eight cadets by:

      (1) preparing a route card by:

         (a) identifying the start point;

         (b) identifying the end point;

(c) selecting the best route by considering:

i. safety,

ii. availability of landmarks,

iii. potential obstacles,

iv. distance,

v. terrain, and

vi. difficulty;

(d) identifying:

i. magnetic bearing,

ii. description,

iii. distance,

iv. time, and

v. elevation gain / loss; and

(e) recording the information on the route card; and

(2) leading the group to the end of one leg along the route;

e. following campsite routine, as detailed by the team leader; and

f. adhering to the principles of leave no trace camping.

4. **Remarks**:

a. This PO is to be provided by technical specialists through a contracted service provider. The contract shall be initiated under the direction of RCSU (Prairie).

b. Some of the lessons taught during this PO mimic those that are being taught during the glacier cycle. If a cadet has already successfully completed that cycle, less time may be spent on similar material and more on alpine trekking specific material.

c. Group size may differ based on park regulations.

d. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide shall be assigned to each training group.

e. IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, the following activity equipment is required for alpine trekking:

(1) communication device (eg, cellular phone or hand-held radio),

(2) first aid kit,

(3) at least one means of purifying water,

(4) topographical / trail map of area as required,

(5) compass, and

(6) bear spray / anti-predator device if travelling in bear / predator country.

f. Personal equipment shall consist of:

(1) expedition field pack,

(2) meals,

(3) sleeping bag,

(4) waterproof compression sack,

(5) air mattress,

(6) clothing,

(7) rain gear,

(8) valise / stuff sack,

(9) whistle,

(10) food,

(11) water carrier,

(12) resealable plastic bags (small and large),

(13) garbage bags,

(14) carabiner,

(15) knife,

(16) headlamp / flashlight,

(17) batteries,

(18) matches,

(19) individual first aid kit, and

(20) personal essentials, to include:

(a) sunscreen,

(b) bug repellent,

(c) lip balm,

(d) biodegradable soap,

(e) toothbrush,

(f) toothpaste, and

(g) toilet paper.

g. Group equipment shall consist of the following:

(1) tent,

(2) stove,

(3) fuel bottle,

(4) fuel,

(5) pot set,

(6) folding saw,

(7) rope,

(8) Glow Sticks, and

(9) expedition repair kit, to include:

(a) duct tape,

(b) lip balm / petroleum jelly,

(c) lubricating oil,

(d) an assortment of fabric swatches,

(e) an assortment of plastic buckles,

(f) an assortment of needles,

(g) thread (heavy duty),

(h) dental floss,

(i) aluminum pole-repair sleeve,

(j) adhesive / seam sealer (Seam Grip),

(k) alcohol swabs,

(l) air mattress patches,

(m) 2–3 m (5–10 feet) of nylon parachute cord,

(n) heavy duty rubber bands,

(o) zap straps,

(p) 1–2 m (3–6 feet) of tubular webbing, and

(q) a lightweight multi-tool.

EO S423.01

1. **Performance**: Prepare for Alpine Trekking

2. **Conditions**:

   a. Given:

      (1) Hiking boots,

      (2) Trekking poles,

      (3) Activity equipment,

      (4) Personal equipment,

      (5) Group equipment,

      (6) Supervision, and

      (7) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall prepare for alpine trekking by:

   a. purifying water using one means of purification;

   b. lighting and extinguishing a stove;

   c. erecting and striking a tent;

   d. packing an expedition field pack; and

   e. adjusting an expedition field pack.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Conduct an activity where the cadets as a group, will divide a selection of equipment into the following: a. personal equipment, b. group equipment, and c. activity equipment.	In-Class Activity	10 min	C2-042 (p. 73) C2-051 (pp. 40–44, pp. 102–107)
TP2	Explain, demonstrate and have the cadets don a pair of hiking boots by: a. selecting socks appropriate for the activity; b. loosening the boot laces; c. pushing the foot into the boot until the toes reach the front;	Demonstration and Performance	10 min	C2-293 (pp. 88–89) C2-295 (pp. 28–30)

TP	Description	Method	Time	Refs
	d. tightening the laces starting closest to the toes and moving up; e. walking around to check for any discomfort; and f. donning a loaded expedition field pack and walking around to check for any discomfort.			
TP3	Explain, demonstrate and have the cadets in two groups: a. purify 2L of water; b. light and extinguish a stove; and c. erect and strike a tent. Note: It is recommended this TP be conducted in two groups—with each group completing the skills concurrently. When one skill is complete, the group moves onto the next skill. The procedure for each skill depends on the equipment being used.	Demonstration and Performance	20 min	
TP4	Explain the procedure for disposal of: a. garbage, and b. human waste. Note: Procedures for the disposal of waste may differ according to the area where the activity takes place. Instructors should familiarize themselves with the regulations.	Interactive Lecture	5 min	C2-295 (pp. 125–127)
TP5	Explain and demonstrate the principles of packing an expedition field pack, to include: a. waterproofing, b. accessibility, c. space management, d. weight distribution, e. balance, and f. compactness.	Demonstration	15 min	C2-293 (pp. 81–83) C2-295 (pp. 33–34)
TP6	Have the cadets pack an expedition field pack by: a. receiving meals; b. stripping meals, if required, by: (1) removing unnecessary items; (2) removing garbage / excess packaging;	Practical Activity	40 min	

TP	Description	Method	Time	Refs
	(3) separating items into snacks and meals; and (4) organizing items into individual plastic bags; c. organizing personal equipment; d. dividing group equipment, to include: (1) tent, (2) fuel, (3) stove, (4) rope, if required, (5) pot set, and (6) expedition repair kit; and e. packing equipment to maximize space and ensure comfort.			
TP7	Explain and demonstrate adjusting an expedition field pack for comfort, to include: a. loosening all straps and placing the pack on the shoulders; b. adjusting the hip belt; c. adjusting the shoulder straps; d. tightening the top tension load lifters; and e. clipping the sternum strap on the chest.	Demonstration	10 min	C2-042 (p. 72, p. 130) C2-051 (p. 97)

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	In-Class Activity:	10 min
c.	Demonstration and Performance:	30 min
d.	Interactive Lecture:	5 min
e.	Demonstration:	25 min
f.	Practical Activity:	40 min
g.	Total:	120 min

6. **Substantiation**:

a. An in-class activity was chosen for TP 1 as it is an interactive way to provoke thought and stimulate interest among cadets in the topic of personal, group and activity equipment pertaining to the alpine trekking cycle.

b. A demonstration and performance was chosen for TPs 2 and 3 as it allows the instructor to explain and demonstrate how to don a pair of hiking boots, erect a tent, light a stove and purify water while providing an opportunity for the cadets to practice each skill under supervision.

c. An interactive lecture was chosen for TP 4 to instruct the cadets on the proper procedure for the disposal of waste.

d. A demonstration was chosen for TPs 5 and 7 as it allows the instructor to explain and demonstrate the principles of packing an expedition field pack and how to adjust the field pack for comfort.

e. A practical activity was chosen for TP 6 as it is an interactive way to allow the cadets to pack an expedition field pack with equipment for the alpine trekking cycle.

7. **References**:

a. C2-042 ISBN 0-7566-0946-1 Berger, K. (2005). *Backpacking & hiking*. New York, NY: DK Limited.

b. C2-051 ISBN 978-0-7153-2254-3 Bagshaw, C. (2006). *The ultimate hiking skills manual*. Cincinatti, OH: David & Charles.

c. C2-293 ISBN 978-0-89886-749-7 Houston, M. & Cosley, K. (2004). *Alpine climbing: Techniques to take you higher*. Seattle, WA: The Mountaineers Books.

d. C2-295 ISBN 978-0-89886-828-9 Cox, M. & Fulsaas, K. (Eds.). (2003). *Mountaineering freedom of the hills* (7th ed). Seattle, WA: The Mountaineers Books.

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area,

b. Hiking boots,

c. Trekking poles,

d. Activity equipment,

e. Personal equipment,

f. Group equipment, and

g. Meals.

9. **Learning Aids**:

a. Hiking boots,

b. Trekking poles,

c. Activity equipment,

d. Personal equipment,

e. Group equipment, and

f. Meals.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 2, S423 PC.

11. **Remarks**:

a. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide shall be assigned to each training group.

b. Some of the material taught during this lesson mimics what is being taught during the glacier cycle. If a cadet has already successfully completed that cycle, less time may be spent on similar material and more on alpine trekking specific material.

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EO S423.02

1. **Performance**: Review Navigation
2. **Conditions**:
   a. Given:
      (1) Topographical map,
      (2) Compass,
      (3) Route card,
      (4) Supervision, and
      (5) Assistance as required.
   b. Denied: Nil.
   c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard**: The cadet shall review navigation, to include:
   a. selecting an appropriate route;
   b. executing navigational skills;
   c. identifying the components of a route card; and
   d. preparing a route card.
4. **Teaching Points**: Conduct a navigation review by:
   a. setting up four learning stations where the cadets in groups of two, will review:
      (1) route selection by selecting the best of three possible routes by considering:
         (a) safety,
         (b) availability of landmarks,
         (c) potential obstacles,
         (d) distance,
         (e) terrain, and
         (f) difficulty;
      (2) navigation skills by:
         (a) determining the distance between the two given points;
         (b) providing the elevation at each point;
         (c) calculating the elevation gain / loss when travelling along the route between the two points;
         (d) determining the rate of travel;
         (e) calculating the magnetic declination of the map;

(f) orienting the map with a compass; and

(g) determining the magnetic bearing of two given points;

(3) preparing a route card by identifying the following on the provided three-leg route:

(a) start point details,

(b) legs,

(c) mode(s) of travel,

(d) grid references(s),

(e) bearing(s),

(f) distance(s),

(g) elevation(s),

(h) total time,

(i) route description(s), and

(j) finish time(s); and

(4) individual pace, and taking and navigating on a given bearing with a compass;

b. conducting a briefing, to include an explanation of:

(1) the objective and importance of the activity;

(2) how the activity will be conducted; and

(3) the resources that are required to perform the activity;

c. starting the activity;

d. rotating the groups through the learning stations every 12 minutes;

e. conducting a group discussion following the completion of the activity during which the cadets will discuss:

(1) how they felt about the activity;

(2) what new information was learned about navigation;

(3) what area of navigation will benefit them the most; and

(4) what area of navigation would require a longer review.

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Practical Activity:	70 min
c.	Total:	80 min

6. **Substantiation**: A practical activity was chosen for this lesson as it is an interactive way for the cadets to develop navigation skills and a route card in a safe and controlled environment. This activity stimulates knowledge and development in navigation while maintaining a fun and challenging setting.

7. **References**:

a. A2-064 A-CR-050-804/PF-001 Director Cadets 6. (2008). *Instructional guide: DP 1 cadet instructors cadre land environmental training course*. Ottawa, ON: Department of National Defence.

b. C2-042 ISBN 0-7566-0946-1 Berger, K. (2005). *Backpacking and hiking*. New York, NY: DK Publishing, Inc.

c. C2-051 ISBN 978-0-7153-2254-0 Bagshaw, C. (2006). *The ultimate hiking skills manual*. Cincinnati, OH: David & Charles.

8. **Training Aids**:

a. 6-foot tables,

b. Navigational worksheet,

c. Marking tape,

d. Measuring tape,

e. Route card,

f. Paper,

g. Pencil,

h. Plotted points,

i. Possible routes,

j. Compass, and

k. Topographical map.

9. **Learning Aids**:

a. Navigational worksheet,

b. Route card,

c. Paper,

d. Pencil,

e. Compass, and

f. Topographical map.

10. **Test Details**: EO is assessed IAW Chapter 3, Annex B, Appendix 2, S423 PC.

11. **Remarks**:

a. Cadets will have 12 minutes per station.

b. Cadets will complete this EO in the training group established in EO S423.01 (Prepare for Alpine Trekking).

c. Adult staff members or staff cadets may be used as assistant instructors if required.

d. Before the start of this EO, mark a 100-m area for pacing and have navigational bearings and markers in place.

e. Each group will consist of three cadets and each cadet must individually complete the navigation and route card portion of the activity.

f. Points and routes will need to be plotted on each map prior to the start of this EO.

g. Rates of travel will differ, depending on factors, such as the group, equipment, terrain, elevation above sea level, etc. Generally on average, including rest time:

(1) a person walks 4 km / hour, 1 km /15 minutes or 100 m /1.5 minutes;

(2) off trail in open terrain, a person can be expected to travel 3 km / h;

(3) on rough, difficult terrain, a person can be expected to travel 1–1.5 km / h; and

(4) when gaining elevation, there should be an extra allowance of 1 hour per every 300 m. When above 3 000 m, the rate of travel will greatly decrease.

EO S423.03

1. **Performance**: Perform Trekking Skills

2. **Conditions**:

   a. Given:

      (1) Hiking boots,

      (2) Trekking poles,

      (3) Activity equipment,

      (4) Personal equipment,

      (5) Group equipment,

      (6) Supervision, and

      (7) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Class 3 terrain IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours.

3. **Standard**: The cadet shall:

   a. maintain personal hiking rhythm;

   b. ascend hills; and

   c. descend hills.

4. **Teaching Points**:

   a. Conduct a pre-trek briefing, to include an explanation of:

      (1) the objectives of the activity, such as:

         (a) daily distance expectations,

         (b) water refill locations,

         (c) route overview, and

         (d) trail etiquette;

      (2) resources required, such as:

         (a) personal equipment,

         (b) group equipment,

         (c) activity equipment, and

         (d) daily water requirements;

(3) any safety guidelines, such as:

(a) order of personnel,

(b) terrain,

(c) rest intervals, and

(d) boundaries.

b. Have the cadets hike along a route, containing Class 3 terrain, over 4 days.

c. Discuss the following during breaks and teachable moments:

(1) terrain, to include:

(a) the Yosemite Decimal System (YDS), and

(b) types of terrain, to include:

i. easy,

ii. moderate, and

iii. difficult;

(2) personal hiking rhythm, to include:

(a) stride rhythm and speed,

i. maintaining a consistent breathing rate;

ii. controlling speed; and

iii. keeping a constant, controlled stride length;

(b) fatigue control, to include:

i. resting where appropriate; and

ii. walking at a pace where conversations can be maintained;

(c) rhythm adjustments, for:

i. poor weather conditions;

ii. the weight being carried; and

iii. travelling uphill;

(d) full body synchronization, to include:

i. swinging arms to provide momentum; and

ii. breathing to control pace;

(e) rest intervals, to include:

i. resting for 10 minutes for every hour hiked;

ii. using only lunch and dinner (supper) breaks for extended rest periods;

iii. ensuring to take off backpacks;

iv. sitting in the shade; and

v. during the extended rest breaks, allowing feet to rest and dry by removing shoes, and airing out footwear; and

(f) employing the rest step by;

i. beginning from an upright position;

ii. stepping forward with the right leg, keeping the weight on the left (back) leg, with the knee locked;

iii. pausing before taking the next step, with the weight still on the back leg;

iv. transferring the weight to the right leg;

v. pushing up with the right leg and taking a step forward with the left leg;

vi. locking the right knee, so that the right leg is bearing all the body weight;

vii. pausing before taking the next step, with the weight still on the back leg;

viii. transferring the weight to the left leg;

ix. pushing up with the left leg and take a step forward with the right leg;

x. pausing before taking the next step, with the weight still on the back leg; and

xi. continuing moving, walking at a slow and steady pace;

(3) ascending and descending hills, to include:

(a) ascending hills by:

i. adjusting stride to take small steps;

ii. maintaining centre of gravity by leaning forward; and

iii. using trekking poles to help maintain balance and minimize strain on the body; and

(b) descending hills by:

i. adjusting stride to take small steps;

ii. bending the knees to cushion the shock;

iii. placing the feet lightly on the ground;

iv. maintaining centre of gravity by leaning back; and

v. using trekking poles to help maintain balance and minimize strain on the body; and

(4) Class 3 terrain hiking techniques, to include:

(a) scrambling;

(b) boulder hopping;

(c) scree crossing, to include:

i. traversing on scree,

ii. climbing on scree, and

iii. descending on scree; and

(d) crossing water obstacles, to include:

i. rivers,

ii. waterlogged ground, and

iii. snow and ice; and

d. Conduct a debriefing by asking the cadets:

(1) how they felt about the activity;

(2) how they felt their team worked together;

(3) what portion of the activity challenged them the most;

(4) how their teammates assisted them when they were challenged; and

(5) what they would try to improve.

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Practical Activity:	1310 min
c.	Total:	1320 min

6. **Substantiation**: A practical activity was chosen for this activity as it is an interactive way for the cadets to practice alpine trekking on class 3 terrain in a safe, controlled environment. These activities contribute to the development of alpine trekking techniques in a fun and challenging setting.

7. **References**:

a. A2-001 A-CR-CCP-951/PT-002 Director Cadets 3. (2006). *Royal Canadian army cadets adventure training safety standards*. Ottawa, ON: Department of National Defence.

b. C2-016 ISBN 1-4000-5309-9 Curtis, R. (2005). *The backpacker's field manual: A comprehensive guide to mastering backcountry skills*. New York, NY: Three Rivers Press.

c. C2-042 ISBN 0-7566-0946-1 Berger, K. (2005). *Backpacking & hiking*. New York, NY: DK Publishing, Inc.

d. C2-051 ISBN 978-0-7153-2254-3 Bagshaw, C. (Ed.). (2006). *The ultimate hiking skills manual*. Cincinnati, OH: David & Charles.

e. C2-295 ISBN 978-0-89886-828-9 Cox, M., & Fulsaas, K. (Eds.). (2003). *Mountaineering freedom of the hills* (7th ed). Seattle, WA: The Mountaineers Books.

8. **Training Aids**:

   a. Hiking boots,

   b. Trekking poles,

   c. Activity equipment,

   d. Personal equipment,

   e. Group equipment,

   f. Route card,

   g. Paper,

   h. Pencil,

   i. Compass, and

   j. Topographical map.

9. **Learning Aids**:

   a. Hiking boots,

   b. Trekking poles,

   c. Activity equipment,

   d. Personal equipment,

   e. Group equipment,

   f. Route card,

   g. Paper,

   h. Pencil,

   i. Compass, and

   j. Topographical map.

10. **Test Details**: EO is assessed IAW Chapter 3, Annex B, Appendix 2, S423 PC.

11. **Remarks**:

   a. Teachable moments are situations that naturally arise during the course of the day and provide an opportunity for discussion.

   b. Cadets will complete this EO in the training group established in EO S423.01 (Prepare for Alpine Trekking).

   c. Two periods of this EO will be completed on camp during the first day of training. It is recommended that during this time the cadets be taught basic trekking skills to better prepare for the cycle.

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PO S425

1. **Performance**: Apply the Competencies of an Outdoor Leader (OL) During Outdoor Adventure Training Activities (OAAs)

2. **Conditions**:

   a. Given:

      (1) Journal,

      (2) Supervision, and

      (3) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Any.

3. **Standard**: The cadet will apply of the competencies of an OL during OAAs by:

   a. identifying the relationship between a competency and an activity;

   b. completing journal entries on situations when the competency was effectively or ineffectively applied during the activity; and

   c. contributing thoughts during a team debriefing at the conclusion of the activity, to discuss:

      (1) incidents where the OL applied the competency, which lead to a positive experience for participants;

      (2) incidents where the OL could have applied the competency to create a more positive experience for participants; and

      (3) how they, when in the role of an OL, would apply the competency to OAAs.

4. **Remarks**: Each cycle is assigned one of the competencies of an OL based on its relationship to an OAA. Competencies of an OL are assigned as follows:

   - conflict management (PO S423 [Alpine Trek on Class 3 Terrain]);
   - program management (PO S452 [Ride a Mountain Bike on Intermediate Trails]);
   - environmental stewardship (PO S455 [Mountaineer on a Glacier]);
   - self-awareness (PO S454 [Climb a Natural Rock Face]);
   - decision making and judgment (PO S453A [Manoeuvre a Canoe on Moving Water] or PO S453B [Manoeuvre a Kayak on Moving Water]); and
   - facilitation (PO S410 [Attain Wilderness First Aid Qualification] and PO S456 [Ride a Horse on Established Trails]).

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EO S425.01

1. **Performance**: Review the Competencies of an Outdoor Leader (OL)

2. **Conditions**:

   a. Given:

      (1) Supervision, and

      (2) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: IAW A-CR-CCP-703/PG-001, *Royal Canadian Army Cadets Silver Star Qualification Standard and Plan*, the cadet shall review:

   a. the definition of an OL; and

   b. the competencies of an OL, to include:

      (1) conflict management,

      (2) program management,

      (3) decision making and judgment,

      (4) self-awareness and professional conduct,

      (5) environmental stewardship,

      (6) facilitation,

      (7) instructional techniques, and

      (8) technical abilities.

4. **Teaching Points**: Review the competencies of an OL by:

   a. conducting a briefing, to include an explanation of:

      (1) the objective and importance of the activity;

      (2) how the activity will be conducted; and

      (3) the resources that are required to perform the activity.

   b. reviewing the definition of an OL;

   c. reviewing each OL competency;

   d. outlining the OL competency chosen for each outdoor adventure activity (OAA)(cycle);

   e. dividing the cadets into eight groups;

   f. having the cadets, in groups, complete the activity by:

      (1) reading the OL competency information sheet;

      (2) filling out the OL competency worksheet;

(3) preparing a three–minute group presentation highlighting the information gathered on the worksheet; and

(4) presenting the information to the entire group; and

g. conducting a group discussion in which the cadets will discuss:

(1) how they felt about the activity;

(2) how OL competencies relate to OAAs;

(3) how each OL competency is related to its chosen cycle;

(4) what new information was learned about OL competencies; and

(5) what OL competency they are looking forward to most.

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	In-Class Activity:	70 min
c.	Total:	80 min

6. **Substantiation**: An in-class activity was chosen for this lesson as it is an interactive way to review the competencies of an OL and link each competency to the chosen outdoor adventure activity.

7. **References**:

a. C2-034 ISBN 0-87322-637-2 Preist, S., & Gass, M. (1997). *Effective leadership in adventure programming*. Windsor, ON: Human Kinetics.

b. C2-109 ISBN 0-7872-6561-6 Sugerman, D., Doherty, K., Garvey, D., & Gass, M. (2000). *Reflective learning: Theory and practice*. Dubuque, IO: Kendall / Hunt Publishing Company.

c. C2-150 ISBN 0-89886-502-6 Graham, J. (1997). *Outdoor leadership: Technique, common sense and self-confidence*. Seattle, WA: The Mountaineers.

d. C2-151 ISBN 0-7360-4709-3 Gilbertson, K., Bates, T., McLaughlin, T., & Ewert, A. (2006). *Outdoor education: Methods and strategies*. Windsor, ON: Human Kinetics.

e. C2-152 ISBN 1-898555-09-5 Ogilvie, K. (1993). *Leading and managing groups in the outdoors: New revised edition*. Cumbria, England: The Institute for Outdoor Learning.

f. C2-153 ISBN 0-7360-5731-5 Martin, B., Cashel, C., Wagstaff, M., & Breunig, M. (2006). *Outdoor leadership: Theory and practice*. Windsor, ON: Human Kinetics.

g. C2-154 ISBN 0-87322-637-2 Priest, S., & Gass, M. (1997). *Effective leadership in adventure programming*. Windsor, ON: Human Kinetics.

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area,

b. OL competency information sheet, and

c. OL competency worksheet.

9. **Learning Aids**:

   a. OL competency information sheet,

   b. OL competency worksheet, and

   c. Pen / pencil.

10. **Test Details**: Nil.

11. **Remarks**: This lesson shall be conducted prior to the start of cycle one.

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EO S425.02

1. **Performance**: Develop Goals for Outdoor Adventure Activities (OAAs)
2. **Conditions**:
   a. Given:
      (1) Supervision, and
      (2) Assistance as required.
   b. Denied: Nil.
   c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard**: The cadet shall:
   a. identify goals, to include:
      (1) the definition of a goal,
      (2) levels of goals, and
      (3) types of goals;
   b. discuss the importance of developing personal and team goals;
   c. develop effective goals that are:
      (1) specific,
      (2) measured,
      (3) achievable,
      (4) relevant, and
      (5) timed; and
   d. as a member of a platoon, develop a full value contract (FVC).
4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Identify goals, to include: a. levels, to include: (1) personal, and (2) team; b. types, to include: (1) long-term goals, (2) short-term, and (3) enabling goals.	Interactive Lecture	10 min	C0-237 (p. 493, p. 1011, p. 1563) C2-034 (p. 19, p. 54, pp. 157–158) C2-152 (p. 241)

TP	Description	Method	Time	Refs
TP2	Discuss the importance of developing personal and team goals, to include: a. increases awareness of personal and group challenge; b. encourages team members to work together; c. motivates team members ; d. supports and encourages team members; and e. developes a sense of personal and group achievement;	Group Discussion	15 min	C2-034 (p. 19, p. 54, pp. 157–158) C0-237 (p. 493, p. 1011, p. 1563) C2-152 (p. 241)
TP3	Discuss how to establish effective goals that are: a. specific, b. measurable, c. achievable, d. relevant, and e. timed;	Interactive Lecture	15 min	C0-019 (pp. 30–31) C0-237 (p. 642) C2-034 (p. 54, p. 149, pp. 157–158)
TP4	Have the cadets, as a platoon, develop a FVC.	In-Class Activity	30 min	C2-038 C2-039

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Interactive Lecture:	25 min
c.	Group Discussion:	15 min
d.	In-Class Activity:	30 min
e.	Total:	80 min

6. **Substantiation**:

a. An interactive lecture was chosen for TPs 1 and 3 to orient the cadets to types of goals and goal setting.

b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge and experiences about the purposes of developing team and personal goals. This helps develop a rapport between cadets and instructor allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

c. An in-class activity was chosen for TP 4 to provide the cadets an opportunity to complete an FVC as it is an interactive way to provoke thought and stimulate interest.

7. **References**:

a. C0-019 ISBN 0-7894-7147-7 Eaton, J., & Johnson, R. (2001). *Coaching successfully*. New York, NY: Dorling Kindersley Publishing, Inc.

b. C0-237 ISBN 0-19-541816-6 Barber, K. (Ed.). (2004). *Canadian Oxford dictionary* (2nd ed.). Don Mills, ON: Oxford University Press Canada.

c. C2-034 ISBN 0-87322-637-2 Preist, S., & Gass, M. (2005). *Effective leadership in adventure programming* (2nd ed.). Windsor, ON: Human Kinetics Publishing Inc.

d. C2-038 ISBN 0-78722-459-6 Henton, M. (1996). *Adventure in the classroom: Using adventure to strengthen learning and build a community of life-long learners*. Dubuque, IA: Kendall Hunt Publishing.

e. C2-152 ISBN 1-898555-09-5 Ogilvie, K. (1993). *Leading and managing groups in the outdoors: New revised edition*. Cumbria, England: The Institute for Outdoor Learning.

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area, and

b. Resources specific to the type of FVC chosen.

9. **Learning Aids**: Resources specific to the type of FVC chosen.

10. **Test Details**: Nil.

11. **Remarks**:

a. This lesson shall be conducted prior to the start of cycle one.

b. During this period of instruction, the cadets should be planning and deciding on short-term goals for each of the cycles.

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EO S425.03

1. **Performance**: Document an Outdoor Adventure Activity (OAA)

2. **Conditions**:

   a. Given:

      (1) Journal,

      (2) Outdoor Adventure Logbook,

      (3) Supervision, and

      (4) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall:

   a. complete journal entries that:

      (1) reflect on their experiences, challenges and achievements during each day of the activity; and

      (2) reflect on situations when competencies of an outdoor leader were effectively or ineffectively applied during the activity;

      (3) can be used during a team debriefing at the conclusion of the activity, to discuss:

         (a) incidents where the OL applied the competency, which lead to a positive experience for participants;

         (b) incidents where the OL could have applied the competency to create a more positive experience for participants; and

         (c) how they, when in the role of an OL, would apply the competency to OAAs;

   b. write in an Outdoor Adventure Logbook to:

      (1) track training and certification history;

      (2) log factual details of an OAA, on a daily basis, by recording the following information:

         (a) who,

         (b) what,

         (c) when, and

         (d) where; and

      (3) keep notes of best practices and things that did not work during the activity.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Discuss the importance of completing journal entries during OAAs as a way to reflect on: a. experiences, b. challenges, c. achievements, and d. outdoor leadership.	Group Discussion	10 min	C2-309 C2-310
TP2	Discuss how to use journal entries during a team debriefing.	Group Discussion	10 min	
TP3	Outline the contents of the Outdoor Adventure Logbook.	Interactive Lecture	5 min	
TP4	Describe the benefits of using an Outdoor Adventure Logbook, such as: a. tracking training received; b. recording factual details of an outdoor adventure activity, such as: (1) who, (2) what, (3) when, and (4) where; and c. keeping notes of best practices and things that did not work during the activity.	Interactive Lecture	5 min	C2-311

5. **Time**:

a. Introduction / Conclusion: 10 min

b. Group Discussion: 20 min

c. Interactive Lecture: 10 min

d. Total: 40 min

6. **Substantiation**:

a. A group discussion was chosen for TPs 1 and 2 as it allows the cadets to interact with their peers and share their knowledge and experiences about completing journal entries on an OAA. This helps develop a rapport between cadets and instructor allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

b. An interactive lecture was chosen for TPs 3 and 4 to orient the cadets to an Outdoor Adventure Logbook.

7. **References**:

a. C2-309 The Mountaineers Books. *Adventure journal*. Retrieved January 12, 2010, from http://www.mountaineersbooks.org/client/client_pages/Media%20Archives/mtn_media_AdventureJournal.cfm

b. C2-310 Ezine Articles. *How to journal–where to begin*. Retrieved January 12, 2010, from http://ezinearticles.com/?How-to-Journal-Where-to-Begin&id=1428832

c. C2-311 E-How. *How to keep a log book*. Retrieved January 12, 2010, from http://www.ehow.com/how_5127408_keep-log-book.html

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area,

b. Journal, and

c. Outdoor Adventure Logbook.

9. **Learning Aids**:

a. Journal, and

b. Outdoor Adventure Logbook.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 3, S425 PC.

11. **Remarks**:

a. This lesson shall be conducted prior to the start of cycle one.

b. The Outdoor Adventure Logbook completed by cadets is a training aid and is not intended to be considered a legal document.

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EO S425.04

1. **Performance**: Apply Conflict Management as an Outdoor Leader (OL)
2. **Conditions**:
   a. Given:
      (1) Supervision, and
      (2) Assistance as required.
   b. Denied: Nil.
   c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard**: The cadet shall apply conflict management as an OL during alpine trekking by:
   a. participating in a conflict management activity;
   b. identifying the relationship between conflict management and alpine trekking, to include:
      (1) the causes of conflict,
      (2) the definition of healthy conflict,
      (3) determining when a conflict becomes a disciplinary issue, and
      (4) approaches for resolving and addressing conflict;
   c. completing journal entries on situations when conflict management was effectively or ineffectively applied during alpine trekking; and
   d. contributing thoughts during a team debriefing at the conclusion of alpine trekking, to discuss:
      (1) incidents where the leader applied conflict management, which lead to a positive experience for participants;
      (2) incidents where the leader could have applied conflict management to create a more positive experience for participants; and
      (3) how they, when in the role of an OL, would apply conflict management to OAAs.
4. **Teaching Points**:
   a. Review how an OL manages conflict during an OAA, to include:
      (1) communicating clearly;
      (2) dealing with difficult people;
      (3) addressing conflicts; and
      (4) resolving conflicts.
   b. Describe how the role-play activity will be conducted, to include:
      (1) cadets will be divided into groups of four,
      (2) each group will be given a role-play scenario to present,

(3) cadets will have five minutes to prepare their role-play, and

(4) the entire group will discuss the role-play scenario following each presentation.

c. Divide the cadets into groups of four.

d. Distribute a role-play scenario to each group.

e. Have the groups prepare their role-play for five minutes.

f. Have each group present their role-play.

g. Conduct a discussion following each role-play, to include:

(1) what caused the conflict in the scenario,

(2) how the leader addressed the conflict,

(3) what the leader did well when reacting to conflict, and

(4) what the leader could have improved upon when reacting to conflict.

h. Conduct a group discussion on managing conflict as an OL when alpine trekking, to include:

(1) the causes of conflict,

(2) the definition of healthy conflict,

(3) determining when a conflict becomes a disciplinary issue, and

(4) approaches for resolving and addressing conflict.

5. **Time**:

a.	Introduction / Conclusion:	5 min
b.	Role-Play:	30 min
c.	Group Discussion:	5 min
d.	Total:	40 min

6. **Substantiation**:

a. A role-play was chosen for TP 1 as it is an interactive way to have the cadets apply conflict management through interaction with each other responding to various realistic situations.

b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge and experiences about conflict management. This helps develop a rapport by allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

7. **References**:

a. C2-150 ISBN 0-89886-502-6 Graham, J. (1997). *Outdoor leadership: Technique, common sense and self-confidence*. Seattle, WA: The Mountaineers.

b. C2-151 ISBN 0-7360-4709-3 Gilbertson, K., Bates, T., McLaughlin, T., & Ewert, A. (2006). *Outdoor education: Methods and strategies*. Windsor, ON: Human Kinetics.

c. C2-152 ISBN 1-898555-09-5 Ogilvie, K. (1993). *Leading and managing groups in the outdoors: New revised edition*. Cumbria, England: The Institute for Outdoor Learning.

d. C2-153 ISBN 0-7360-5731-5 Martin, B., Cashel, C., Wagstaff, M., & Breunig, M. (2006). Outdoor *leadership: Theory and practice*. Windsor, ON: Human Kinetics.

e. C2-154 ISBN 0-87322-637-2 Priest, S., & Gass, M. (1997). *Effective leadership in adventure programming*. Windsor, ON: Human Kinetics.

8. **Training Aids**: Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area.

9. **Learning Aids**: Conflict Scenarios.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 3, S425 PC.

11. **Remarks**:

a. This lesson shall be conducted at the start of the alpine trekking cycle.

b. The application of this competency of an OL shall be the primary focus during the alpine trekking cycle. Adult staff should try to incorporate other competencies as they occur.

c. Cadets shall complete journal entries and participate in team debriefings during the OAA phase of the cycle.

d. During the debriefing sessions the instructor should identify the application of other competencies of an OL if they occurred.

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EO S425.05

1. **Performance**: Apply Program Management as an Outdoor Leader (OL)

2. **Conditions**:

   a. Given:

      (1) Supervision, and

      (2) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall apply program management as an OL during mountain biking by:

   a. participating in a program management activity;

   b. identifying the relationship between risk management and mountain biking, to include:

      (1) the definition of risk,

      (2) acceptable levels of risk for outdoor adventure activities (OAAs), and

      (3) using skills and experience as an OL to manage risk and ensure safety of activity participants;

   c. completing journal entries on situations when risk management was effectively or ineffectively applied during mountain biking; and

   d. contributing thoughts during a team debriefing at the conclusion of mountain biking, to discuss:

      (1) incidents where the leader applied risk management, which lead to a positive experience for participants;

      (2) incidents where the leader could have applied program management to create a more positive experience for participants; and

      (3) how they, when in the role of an OL, would apply program management to OAAs.

4. **Teaching Points**:

   a. Review how an OL manages risk during an OAA, to include:

      (1) assessing risk;

      (2) mitigating risk; and

      (3) developing a contingency plan.

   b. Describe how the activity will be conducted, to include:

      (1) cadets will be divided into groups of three, and

      (2) each group will be given a scenario to evaluate risk and a handout of questions to answer.

   c. Divide the cadets into groups of three.

   d. Distribute a scenario and a handout to each group.

   e. Have the groups discuss their scenario and complete the handout for 10 minutes.

f. Have each group discuss their scenario with the group, to include:

(1) areas of risk that were identified in the scenario, and

(2) methods that could be used to manage areas of risk.

g. Conduct a group discussion on managing risk as an OL when mountain biking, to include:

(1) the definition of risk,

(2) acceptable levels of risk for OAAs, and

(3) using skills and experience as an OL to manage risk and ensure safety of activity participants.

5. **Time**:

a.	Introduction / Conclusion:	5 min
b.	In-Class Activity:	30 min
c.	Group Discussion:	5 min
d.	Total:	40 min

6. **Substantiation**:

a. An in-class activity was chosen for TP 1 as it is an interactive way to have the cadets apply program management when mountain biking.

b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge and experiences about program management. This helps develop a rapport by allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

7. **References**:

a. C2-152 ISBN 1-898555-09-5 Ogilvie, K. (1993). *Leading and managing groups in the outdoors: New revised edition*. Cumbria, England: The Institute for Outdoor Learning.

b. C2-154 ISBN 0-87322-637-2 Priest, S., & Gass, M. (1997). *Effective leadership in adventure programming*. Windsor, ON: Human Kinetics.

c. C2-250 Leemon, D., & Schimelpfenig, T. (2005). *Risk management for outdoor leaders*. Lander, WY: National Outdoor Leadership School.

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area,

b. Scenarios, and

c. Worksheet.

9. **Learning Aids**:

a. Scenario,

b. Worksheet, and

c. Pen / Pencil.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 3, S425 PC.

11. **Remarks**:

    a. This lesson shall be conducted at the start of the mountain biking cycle.

    b. The application of this competency of an OL shall be the primary focus during the mountain biking cycle. Adult staff should try to incorporate other competencies as they occur.

    c. Cadets shall complete journal entries and participate in team debriefings during the OAA phase of the cycle.

    d. During the debriefing session the instructor should identify the application of other competencies of an OL if they occurred.

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EO S425.06

1. **Performance**: Apply Decision Making and Judgment as an Outdoor Leader (OL)

2. **Conditions**:

   a. Given:

      (1) Supervision, and

      (2) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall apply decision making and judgment as an OL during canoeing / kayaking by:

   a. participating in a decision making and judgment activity;

   b. identifying the relationship between decision making and judgment, during canoeing / kayaking, to include:

      (1) the requirement for an OL to be able to make decisions and judgment calls in a timely manner during an outdoor adventure activity (OAA),

      (2) predicting possible outcomes, and

      (3) problem-solving methods and strategies;

   c. completing journal entries on situations when decision making and judgment were effectively or ineffectively applied during canoeing / kayaking; and

   d. contributing thoughts during a team debriefing at the conclusion of canoeing / kayaking, to discuss:

      (1) incidents where the leader applied decision making and judgment that which lead to a positive experience for participants;

      (2) incidents where the leader could have applied decision making and judgment to create a more positive experience for participants; and

      (3) how they, when in the role of an OL, would apply decision making and judgment to OAAs.

4. **Teaching Points**:

   a. Review how an OL makes decisions and judgment calls during an OAA, to include:

      (1) anticipating problems;

      (2) developing problem-solving skills through experienced-based knowledge; and

      (3) solving problems decisively.

   b. Describe how the activity is conducted, to include:

      (1) cadets completing the Make Your Choice Activity Book, and

      (2) discussing, in groups of no more than five cadets, choices made during the activity.

   c. Distribute an activity book to each cadet.

d. Have the cadets work on the activity book for 15 minutes.

e. Divide the cadets in groups of no more than five.

f. Have the groups discuss:

(1) the choices they made,

(2) why they made that specific choice, and

(3) how the wrong choice could be handled to make the outcome more preferable.

g. Conduct a group discussion on the importance of effective decision making and judgment as an OL when canoeing / kayaking.

5. **Time**:

a.	Introduction / Conclusion:	5 min
b.	In-Class Activity:	25 min
c.	Group Discussion:	10 min
d.	Total:	40 min

6. **Substantiation**:

a. An in-class activity was chosen for TP 1 as it is an interactive way to have the cadets examine why decision making and judgment are important to apply when leading canoeing / kayaking.

b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge and experiences of decision making and judgment. This helps develop a rapport by allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

7. **References**:

a. C2-150 ISBN 0-89886-502-6 Graham, J. (1997). *Outdoor leadership: Technique, common sense and self-confidence*. Seattle, WA: The Mountaineers.

b. C2-151 ISBN 0-7360-4709-3 Gilbertson, K., Bates, T., McLaughlin, T., & Ewert, A. (2006). *Outdoor education: Methods and strategies*. Windsor, ON: Human Kinetics.

c. C2-152 ISBN 1-898555-09-5 Ogilvie, K. (1993). *Leading and managing groups in the outdoors: New revised edition*. Cumbria, England: The Institute for Outdoor Learning.

d. C2-153 ISBN 0-7360-5731-5 Martin, B., Cashel, C., Wagstaff, M., & Breunig, M. (2006). Outdoor *leadership: Theory and practice*. Windsor, ON: Human Kinetics.

e. C2-154 ISBN 0-87322-637-2 Priest, S., & Gass, M. (1997). *Effective leadership in adventure programming*. Windsor, ON: Human Kinetics.

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area, and

b. Make Your Choice Activity Book.

9. **Learning Aids**:

   a. Make Your Choice Activity Book, and

   b. Pen / pencil.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 3 S425 PC.

11. **Remarks**:

   a. This lesson shall be conducted at the start of the canoe or kayak cycle.

   b. The application of this competency of an OL shall be the primary focus during the canoe / kayak cycle. Adult staff should try to incorporate other competencies as they occur.

   c. Cadets shall complete journal entries and participate in team debriefings during the OAA phase of the cycle.

   d. During the debriefing session the instructor should identify the application of other competencies of an OL if they occurred.

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EO S425.07

1. **Performance**: Apply Self-Awareness and Professional Conduct as an Outdoor Leader (OL)

2. **Conditions**:

   a. Given:

      (1) Supervision, and

      (2) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall apply self-awareness and professional conduct as an OL during rock climbing by:

   a. participating in a self-awareness and professional conduct activity;

   b. identifying the relationship between self-awareness and professional conduct, and rock climbing, to include:

      (1) being aware of one's personal abilities and limitations as an OL,

      (2) the impact of the OLs actions (intentional or unintentional) on activity participants, and

      (3) the impact of stress on the personal performance of the OL;

   c. completing journal entries on situations when self-awareness and professional conduct was effectively or ineffectively applied during rock-climbing; and

   d. contributing thoughts during a team debriefing at the conclusion of rock climbing, to discuss:

      (1) incidents where the leader applied self-awareness and professional conduct, which lead to a positive experience for participants;

      (2) incidents where the leader could have applied self-awareness and professional conduct to create a more positive experience for participants; and

      (3) how they, when in the role of an OL, would apply self-awareness and professional conduct to OAAs.

4. **Teaching Points**:

   a. Review self-awareness and professional conduct as it applies to an OL, to include:

      (1) being aware of one's personal abilities and limitations;

      (2) being mindful of all actions (intentional or unintentional);

      (3) managing stress; and

      (4) demonstrating professional conduct, to include:

         (a) trustworthiness,

         (b) flexibility,

         (c) approachability,

(d) commitment,

(e) awareness of position of authority, and

(f) modelling;

b. Describe how the activity will be conducted, to include:

(1) cadets will work independently,

(2) each cadet will be given a blank piece of paper and coloured pencils / markers, and

(3) cadets will have 15 minutes to draw their personal collage, to include representations of:

(a) a fear,

(b) a weakness,

(c) a strength, and

(d) a personal goal.

c. Distribute a piece of paper and coloured pencils / markers to each cadet.

d. Provide the cadets 15 minutes to draw their personal collages, to include representations of:

(a) a fear,

(b) a weakness,

(c) a strength, and

(d) a personal goal.

e. Encourage the cadets to share their collages with the class (not mandatory).

f. Conduct a group discussion on the importance of self-awareness and professional conduct when rock climbing, to include:

(1) being aware of one's personal abilities and limitations as an OL,

(2) the impact of the OL's actions (intentional or unintentional) on activity participants, and

(3) the impact of stress on personal performance as an OL.

5. **Time**:

a.	Introduction / Conclusion:	5 min
b.	In-Class Activity:	30 min
c.	Group Discussion:	5 min
d.	Total:	40 min

6. **Substantiation**:

a. An in-class activity was chosen for TP 1 as it is an interactive way to have the cadets recognize the importance of applying self-awareness and professional conduct when leading during the rock climbing cycle.

b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge and experiences about self-awareness and professional conduct. This helps develop a rapport by allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

7. **References**:

a. C2-150 ISBN 0-89886-502-6 Graham, J. (1997). *Outdoor leadership: Technique, common sense and self-confidence*. Seattle, WA: The Mountaineers.

b. C2-152 ISBN 1-898555-09-5 Ogilvie, K. (1993). *Leading and managing groups in the outdoors: New revised edition*. Cumbria, England: The Institute for Outdoor Learning.

c. C2-153 ISBN 0-7360-5731-5 Martin, B., Cashel, C., Wagstaff, M., & Breunig, M. (2006). *Outdoor leadership: Theory and practice*. Windsor, ON: Human Kinetics.

8. **Training Aids**: Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area.

9. **Learning Aids**:

a. Blank paper, and

b. Coloured pencils / markers.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 3 S425 PC.

11. **Remarks**:

a. This lesson shall be conducted at the start of the rock climbing cycle.

b. The application of this competency of an OL shall be the primary focus during the rock climbing cycle. Adult staff should try to incorporate other competencies as they occur.

c. Cadets shall complete journal entries and participate in team debriefings during the OAA phase of the cycle.

d. During the debriefing session the instructor should identify the application of other competencies of an OL if they occurred.

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EO S425.08

1. **Performance**: Apply Environmental Stewardship as an Outdoor Leader (OL)

2. **Conditions**:

   a. Given:

      (1) Supervision, and

      (2) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall apply environmental stewardship as an OL during mountaineering by:

   a. participating in a environmental stewardship activity;

   b. identifying the relationship between environmental stewardship and mountaineering, to include:

      (1) human impact on glaciers,

      (2) the impact of glacier travel on the glacier environment,

      (3) the importance of the OL having knowledge about the area being visited, and

      (4) the responsibility of the OL to comply with the requirements and regulations of the park or area;

   c. completing journal entries on situations when environmental stewardship was effectively or ineffectively applied during mountaineering; and

   d. contributing thoughts during a team debriefing at the conclusion of mountaineering, to discuss:

      (1) incidents where the leader applied environmental stewardship, which lead to a positive experience for participants;

      (2) incidents where the leader could have applied environmental stewardship to create a more positive experience for participants; and

      (3) how they, when in the role of an OL, would apply environmental stewardship to OAAs.

4. **Teaching Points**:

   a. Review environmental stewardship as it applies to an OL, to include:

      (1) environmental ethics,

      (2) ecological literacy, and

      (3) parks and protected areas management.

   b. Describe how the activity will be conducted, to include:

      (1) cadets will be divided into pairs,

      (2) each pair will be given a Going, Going, Gone Brochure, an environmental stewardship worksheet and a pen / pencil,

(3) cadets will have 15 minutes to read the brochure and record answers, and

(4) the group will discuss the worksheet answers.

c. Divide the cadets into pairs.

d. Distribute a Going, Going, Gone Brochure, an environmental stewardship worksheet and a pen / pencil to each pair.

e. Allow 15 minutes for cadets, as a pair, to read the brochure and complete the worksheet.

f. Discuss the worksheet answers with the entire group.

g. Conduct a group discussion on applying environmental stewardship as an OL when mountaineering, to include:

(1) human impact on glaciers,

(2) the impact of glacier travel on the glacier environment,

(3) the importance of the outdoor leader having knowledge about the area being visited, and

(4) the responsibility of the outdoor leader to comply with the requirements and regulations of the park or area.

5. **Time**:

a.	Introduction / Conclusion:	5 min
b.	In-Class Activity:	30 min
c.	Group Discussion:	5 min
d.	Total:	40 min

6. **Substantiation**:

a. An in-class activity was chosen for TP 1 as it is an interactive way to have the cadets recognize the importance of applying environmental stewardship when leading mountaineering.

b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge and experiences about environmental stewardship. This helps develop a rapport by allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

7. **References**:

a. C2-150 ISBN 0-89886-502-6 Graham, J. (1997). *Outdoor leadership: Technique, common sense and self-confidence*. Seattle, WA: The Mountaineers.

b. C2-152 ISBN 1-898555-09-5 Ogilvie, K. (1993). *Leading and managing groups in the outdoors: New revised edition*. Cumbria, England: The Institute for Outdoor Learning.

c. C2-153 ISBN 0-7360-5731-5 Martin, B., Cashel, C., Wagstaff, M., & Breunig, M. (2006). *Outdoor leadership: Theory and practice*. Windsor, ON: Human Kinetics.

d. C2-313 World Wild Fund for Nature (WWF). *Going, going, gone: Climate change & global glacier decline*. Copyright 1986 by WWF. Retrieved March 16, 2010, from http://assets.panda.org/downloads/glacierspaper.pdf

8. **Training Aids**:

   a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area,

   b. Going, Going, Gone Brochure, and

   c. Environmental stewardship worksheet.

9. **Learning Aids**:

   a. Going, Going, Gone Brochure,

   b. Environmental stewardship worksheet, and

   c. Pen / pencil.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 3, S425 PC.

11. **Remarks**:

   a. This lesson shall be conducted at the start of the mountaineering cycle.

   b. The application of this competency of an OL shall be the primary focus during the mountaineering cycle. Adult staff should try to incorporate other competencies as they occur.

   c. Cadets shall complete journal entries and participate in team debriefings during the OAA phase of the cycle.

   d. During the debriefing session the instructor should identify the application of other competencies of an OL if they occurred.

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EO S425.09

1. **Performance**: Apply Facilitation as an Outdoor Leader (OL)

2. **Conditions**:

   a. Given:

      (1) Supervision, and

      (2) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall apply facilitation as an OL during horseback riding and first aid training by:

   a. participating in a facilitation activity;

   b. identifying the relationship between facilitation, and horseback riding and first aid training, to include:

      (1) identifying the purpose for conducting an outdoor adventure activity (OAA),

      (2) reflecting when leading OAAs, and

      (3) applying time-management techniques;

   c. completing journal entries on situations when facilitation was effectively or ineffectively applied during horseback riding and first aid training; and

   d. contributing thoughts during a team debriefing at the conclusion of horseback riding and first aid training, to discuss:

      (1) incidents where the leader applied facilitation, which lead to a positive experience for participants;

      (2) incidents where the leader could have applied facilitation to create a more positive experience for participants; and

      (3) how they, when in the role of an OL, would apply facilitation to OAAs.

4. **Teaching Points**:

   a. Review how an OL facilitates during horseback riding, to include:

      (1) resolving conflicts;

      (2) communicating effectively;

      (3) fostering personal trust and group cooperation; and

      (4) debriefing and guiding reflection during and following an OAA.

   b. Describe how the activity will be conducted, to include:

      (1) cadets will be divided into groups of four;

      (2) each group will be distributed a Facilitation Toolbox handout and a pen / pencil;

(3) each cadet will discuss a facilitation tool / tip that they have used or observed on previous OAAs with the group; to include:

(a) conflict management,

(b) communication,

(c) team / trust building,

(d) reflection, and

(e) time management;

(4) cadets will record the tools / tips on the Facilitation Toolbox handout; and

(5) the groups will present their tools / tips.

c. Conduct the activity.

d. Conduct a group discussion on facilitating as an OL during horseback riding and first aid training, to include:

(1) identifying the purpose for conducting an OAA,

(2) reflecting when leading OAAs, and

(3) applying time-management techniques.

5. **Time**:

a.	Introduction / Conclusion:	5 min
b.	In-Class Activity:	30 min
c.	Group Discussion:	5 min
d.	Total:	40 min

6. **Substantiation**:

a. An in-class activity was chosen for TP 1 as it is an interactive way to have the cadets recognise the importance of applying facilitation.

b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge and experiences about facilitation. This helps develop a rapport by allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

7. **References**:

a. C2-150 ISBN 0-89886-502-6 Graham, J. (1997). *Outdoor leadership: Technique, common sense and self-confidence*. Seattle, WA: The Mountaineers.

b. C2-152 ISBN 1-898555-09-5 Ogilvie, K. (1993). *Leading and managing groups in the outdoors: New revised edition*. Cumbria, England: The Institute for Outdoor Learning.

c. C2-153 ISBN 0-7360-5731-5 Martin, B., Cashel, C., Wagstaff, M., & Breunig, M. (2006). *Outdoor leadership: Theory and practice*. Windsor, ON: Human Kinetics.

8. **Training Aids**: Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area.

9. **Learning Aids**:

   a. Facilitation Toolbox handout, and

   b. Pen / pencil.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 3, S425 PC.

11. **Remarks**:

   a. This lesson shall be conducted at the start of the horseback riding and first aid cycle.

   b. The application of this competency of an OL shall be the primary focus during the horseback riding and wilderness first aid cycle. Adult staff should try to incorporate other competencies as they occur.

   c. Cadets shall complete journal entries and participate in team debriefings during the OAA phase of the cycle.

   d. During the debriefing session the instructor should identify the application of other competencies of an OL if they occurred.

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PO S452

1. **Performance**: Ride a Mountain Bike on Intermediate Trails

2. **Conditions**:

   a. Given:

      (1) Fully equipped mountain bike,

      (2) Helmet,

      (3) Activity equipment,

      (4) Personal equipment,

      (5) Supervision, and

      (6) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Intermediate mountain bike trails IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours.

3. **Standard**: The cadet will ride a mountain bike on intermediate trails, to include:

   a. fitting a mountain bike, to include:

      (1) sizing by eye; and

      (2) performing the stand-over test; and

   b. performing mountain biking skills, to include:

      (1) braking to control speed for the environment (eg, other riders, obstacles) as required by applying equal pressure to the right- and left-brake levers;

      (2) ascending hills by:

         (a) shifting down to a medium-intensity gear;

         (b) continuing to lower the cogs to maintain pedal power; and

         (c) maintaining centre of gravity by leaning forward; and

      (3) descending hills by:

         (a) controlling speed by braking as necessary;

         (b) shifting to a higher gear to provide momentum; and

         (c) maintaining centre of gravity by:

            i. leaning back;

            ii. moving the body weight toward the back of the mountain bike;

            iii. keeping the body as low as possible; and

            iv. extending the arms straight in front of the body;

(4) a log hop over a piece of wood, a tree root, or rock 5–7 cm high by:

(a) adjusting body position approximately one metre away from the obstacle by shifting the body weight toward the rear of the mountain bike;

(b) lifting the front wheel before reaching the obstacle;

(c) placing the front wheel on or over the obstacle;

(d) shifting the body weight to the front of the mountain bike; and

(e) clearing the obstacle; and

(5) cornering by:

(a) plotting a line;

(b) controlling speed; and

(c) looking ahead.

4. **Remarks**:

a. This PO is to be provided by technical specialists through a contracted service provider. The contract shall be initiated under the direction of RCSU (Prairie).

b. IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, a fully equipped mountain bike is described as having the following:

(1) bell or horn,

(2) lights, and

(3) reflectors.

c. Activity equipment shall consist of the following:

(1) IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*:

(a) reflective vest (worn by person in rear of group),

(b) first aid kit,

(c) communication device (eg, hand-held radio), and

(d) mountain bike repair kit, to include:

i. spare tube,

ii. tube patch kit,

iii. tire levers,

iv. mini pump with gauge, and

v. bike multi-tool, to include:

(i) 2-, 2.5-, 3-, 4-, 5-, 6- and 8-mm hex keys,

(ii) chain tool,

(iii) flat screwdriver,

(iv) Phillips screwdriver,

(v) T-25 Torx spoke key,

(vi) spoke wrenches, and

(vii) 8- and 10-mm open wrenches,

(2) topographical / trail map of area as required,

(3) compass, and

(4) Global Positioning System (GPS) receiver.

d. Personal equipment shall consist of the following:

(1) rain gear,

(2) water carrier,

(3) day pack,

(4) whistle, and

(5) personal essentials, to include:

(a) sunscreen,

(b) bug repellent, and

(c) lip balm.

e. Cadets who have previously completed the Basic Expedition and Expedition Instructor courses may have their skill level assessed and training altered so that more time is given to practice mountain biking skills.

f. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide shall be assigned to each training group.

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EO S452.01

1. **Performance**: Prepare for Mountain Biking

2. **Conditions**:

   a. Given:

      (1) Fully equipped mountain bike,

      (2) Supervision, and

      (3) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Classroom or training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall:

   a. describe the six codes of conduct that minimize the impact of mountain biking on the environment and other trail users;

   b. discuss trail and road safety regulations, to include:

      (1) safety equipment;

      (2) rules of the road for bikers;

      (3) signalling; and

      (4) riding discipline; and

   c. describe mountain bike trails.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Conduct an in-class activity where the cadets, in a group of no more than six, will identify and label the parts of a mountain bike, to include: a. handlebar, b. gear shifter, c. brake lever, d. stem, e. top tube, f. front fork, g. tire, h. rim, i. spoke, j. hub, k. quick release,	In-Class Activity	20 min	C2-082 (pp. 356–362) C2-084 (p. 12, p. 13, pp. 234–239) C2-088 (p. 18)

TP	Description	Method	Time	Refs
	l. dropout (front and rear), m. derailleur (front and rear), n. chainring, o. chainset, p. crank, q. pedal, r. chain, s. chainstay, t. cogs, u. cassette, v. brakes, w. seat tube, x. seat post release, y. seat post, and z. saddle.			
TP2	Describe the six codes of conduct that minimize the impact of mountain biking on the environment and other trail users, to include: a. riding on open trails only; b. practicing the principles of Leave No Trace; c. controlling the bicycle; d. giving way to other users; e. avoiding animals; and f. planning ahead.	Interactive Lecture	15 min	C2-083 (p. 13) C2-087 (p. 31)
TP3	Describe the importance of following trail and road safety regulations when mountain biking, to include: a. using safety equipment, to include: (1) helmet, (2) reflective vest, (3) bell or horn, and (4) light and reflectors; b. adhering to the rules of the road for bikers; c. signalling, to include: (1) left, (2) right, and (3) stop; and	Interactive Lecture	20 min	A2-001 (pp. 8-1 to 8-3) C2-089 C2-092

TP	Description	Method	Time	Refs
	d. riding discipline, to include: (1) formations for riding, (2) spacing, (3) stopping / starting procedures, and (4) road crossing.			
TP4	Describe mountain bike trails, to include: a. the International Mountain Bicycling Association trail rating system for mountain bike use, to include: (1) novice trails, (2) intermediate trails, and (3) experienced trails; and b. trail types available for mountain biking, to include: (1) multi-use trails, (2) single-use mountain bike trails, (3) double track trails, and (4) single track trails.	Interactive Lecture	15 min	C2-087 (p. 32) C2-090

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	In-Class Activity:	20 min
c.	Interactive Lecture:	50 min
d.	Total:	80 min

6. **Substantiation**:

a. An in-class activity was chosen for TP 1 as it is an interactive way to review the parts of the mountain bike.

b. An interactive lecture was chosen for TPs 2–4 to orient the cadets to the six codes of conduct that minimize the impact of mountain biking on the environment and other trail users, the importance of following trail and road safety regulations when mountain biking, and mountain bike trails.

7. **References**:

a. C2-082 ISBN 1-57954-883-0 Downs, T. (2005). *Bicycle maintenance & repair for road & mountain bikes*. USA: Rodale Inc.

b. C2-083 ISBN 0-07-149390-5 Brink, T. (2007). *The complete mountain biking manual*. Camden, ME: Ragged Mountain Press.

c. C2-084 ISBN 1-55297-734-X Allwood, M. (2004). *Mountain bike maintenance: The illustrated manual*. Richmond Hill, ON: Firefly Books Ltd.

d. C2-087 Badyk, M., Buck, K., Sahl, N., Schultz, R., & Vrooman, D. (1998). *Ontario learn to mountain bike clinic workbook* (2nd ed.). North York, ON: Ontario Cycling Association and Ontario Recreational Mountain Bicycling Alliance

e. C2-088 ISBN 1-55297-653-X Crowther, N. (2002). *The ultimate mountain bike book: The definitive illustrated guide to bikes, components, techniques, thrills and trails*. Toronto, ON: Firefly Books Ltd.

f. C2-089 Ministry of Transport Ontario. (2007). *Young cyclists guide*. Retrieved October 5, 2007, from http://www.mto.gov.on.ca/english/safety/cycling/youngcyclist.htm

g. C2-090 International Mountain Bicycling Association. (2007). *Trail difficulty*. Retrieved October 10, 2007, from http://www.imba.com/resources/trail_building/itn_17_4_trail_difficulty.html

h. C2-092 Ministry of Transport Ontario. (2007). *Cycling skills: Cycling safety for teen and adult cyclists*. Retrieved October 5, 2007, from http://www.mto.gov.on.ca/english/pubs/cycling/cyclingskills.htm

i. C2-307 Ministry of Transport Alberta. (2004). *Traffic safety in Alberta*. Retrieved January 19, 2010, from http://www.saferoads.com/safety/educators_ebicycle.html

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area, and

b. Fully equipped mountain bike.

9. **Learning Aids**: Fully equipped mountain bike.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 5 S452 PC.

11. **Remarks**:

a. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide shall be assigned to each training group.

b. Cadets who have previously completed the Basic Expedition and Expedition Instructor courses, may have their skill level assessed and training altered so that more time is given to practice mountain biking skills.

EO S452.02

1. **Performance**: Repair a Mountain Bike

2. **Conditions**:

   a. Given:

      (1) Fully equipped mountain bike,

      (2) Mountain bike repair kit,

      (3) Supervision, and

      (4) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall:

   a. repair a damaged chain;

   b. adjust a mechanical disc brake;

   c. adjust the rear and front derailleur;

   d. repair a flat tire, in a group of three; and

   e. replace a cable.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Identify the components of a mountain bike repair kit, to include: a. spare tube, b. tube patch kit, to include: (1) patches, (2) glue, and (3) sandpaper; c. tire levers, d. bike multi-tool, to include: (1) 2-, 2.5-, 3-, 4-, 5-, 6- and 8-mm hex (Allen) keys, (2) chain tool, (3) flat-head screwdriver, (4) Phillips screwdriver, (5) T-25 Torx spoke key,	Interactive Lecture	5 min	C2-082 (p. 7)

TP	Description	Method	Time	Refs
	(6) spoke wrenches, and (7) 8- and 10-mm open wrenches; and e. mini pump with gauge.			
TP2	Identify the parts of a link in a mountain bike chain, to include: a. side plates, b. rollers, and c. rivets.	Interactive Lecture	5 min	C2-082 (p. 164) C2-084 (p. 94)
TP3	Explain, demonstrate and have the cadets: a. split a chain, to include: (1) locating the link which has to be removed; (2) laying the chain on the chain tool, so it sits in the furthest away position; (3) turning the handle of the chain tool clockwise until the pin lines up with the centre of the chain rivet; (4) continuing to rotate the chain tool handle, pushing the rivet until it rests on the far outer plate; (5) taking the chain off the chain tool; (6) flexing the chain to free the inner segment from the rivet; (7) separating the chain; and (8) repeating the process two rivets down in order to remove one complete link; and b. rejoin the chain, to include: (1) turning the chain so that the rivet at the wide end faces towards the body of the individual completing the repair; (2) feeding the chain through the drive shaft, placing the chain on the smallest sprocket on the rear cassette and dropping it into the gap between the chainset and the frame at the front to give enough slack to rejoin the chain;	Demonstration and Performance	20 min	C2-084 (pp. 32–33)

TP	Description	Method	Time	Refs
	(3) easing the two ends of the chain together by flexing the chain so that the inner segment can slide past the stub of the rivet sticking through to the inside of the outer plate; (4) laying the chain on the chain tool so it sits in the position furthest away; (5) turning the handle of the chain tool clockwise, pushing the rivet into the chain until there is an even amount of rivet showing on both sides of the chain; (6) removing the tool by turning the handle counter-clockwise; (7) bending the chain to ensure the link is not stiff; and (8) replacing the chain onto the chainring.			
TP4	Identify the components of a mechanical disc brake system, to include: a. brake lever, to include: (1) barrel-adjuster, and (2) lockring; b. brake cable, c. caliper, to include: (1) barrel-adjuster, (2) lockring, (3) cable clamp bolt, and (4) actuation lever; and d. rotor.	Interactive Lecture	5 min	C2-084 (pp. 68–77)
TP5	Explain and demonstrate how the components of a mechanical disc brake system work together to slow down / stop a mountain bike: a. the mountain biker pulls the brake lever, b. the pulling of the brake lever tensions the brake cable, c. the tensioning of the brake cable pulls the actuation lever, d. the pulling of the actuation lever twists the piston inside the caliper,	Demonstration	5 min	C2-084 (pp. 68–77)

TP	Description	Method	Time	Refs
	e. the twisting of the piston inside the caliper pushes the outer brake pad towards the rotor, f. the pushing of the outer brake pad on the rotor bends the rotor slightly so that it in turn is pushed against the inner (stationary) brake pad, g. the pushing of both the outer and inner (stationary) brake pads traps the rotor and thereby stops / slows down the mountain bike, and h. the mountain biker releases the brake lever.			
TP6	Explain, demonstrate and have the cadets adjust a mechanical disc brake, to include: a. regulating the tension in the brake cable using: (1) the barrel-adjusters, and / or (2) the cable clamp bolt; and b. repositioning the inner (stationary) brake pad.	Demonstration and Performance	10 min	C2-084 (pp. 78–79)
TP7	Identify the components of the front and rear derailleur systems, to include: a. gear shifter, b. gear cable and casing, c. cable clamp bolt, d. barrel-adjuster, e. limit screws, f. chainring, g. cog, h. front derailleur, to include front derailleur cage, and i. rear derailleur, to include: (1) rear derailleur cage, (2) guide jockey wheel, and (3) tension jockey wheel.	Interactive Lecture	5 min	C2-082 (p. 194– 221) C2-084 (p. 108– 112, pp. 115–119) C2-223 C2-224
TP8	Explain and demonstrate how the components of the front and rear derailleur systems operate to change the gears on a mountain bike.	Demonstration	5 min	C2-084 (pp. 108–112, pp. 115–119)

TP	Description	Method	Time	Refs
TP9	Explain, demonstrate and have the cadets adjust the front and rear derailleur, to include: a. adjusting the high and low limit screws on the: (1) front derailleur, and (2) rear derailleur; and b. tensioning the gear cable on the: (1) front derailleur, and (2) rear derailleur.	Demonstration and Performance	10 min	C2-082 (pp. 194–221) C2-083 (p. 81) C2-084 (pp. 108–109, pp. 115–119) C2-223 C2-224
TP10	Identify the parts of a wheel, to include: a. tire, b. tire bead, c. inner tube, d. rim, e. rim strip, f. rim edge, g. spoke nipple, h. spoke, i. valve, and j. valve hole.	Interactive Lecture	5 min	C2-082 (p. 48, p. 58)
TP 11	Explain, demonstrate and have the cadets, in a group of three, repair a flat tire, to include: a. releasing the brake cable, if required by: (1) squeezing the brake units together; (2) pulling the noodle gently but firmly away from the cable clamp bolt; (3) releasing the noodle from the hanger; and (4) lifting the noodle up and away, allowing the brake units to fall to either side; b. removing: (1) the front wheel by: (a) turning the mountain bike upside down; (b) opening the quick release lever;	Demonstration and Performance	20 min	C2-082 (pp. 56–60) C2-084 (pp. 26–29) C2-088 (pp. 48–51)

TP	Description	Method	Time	Refs
	(c) turning the quick release lever counter-clockwise while holding the nut on the other side; and (d) pulling the wheel up and forward out of the front dropout; and / or (2) the rear wheel by: (a) lifting the rear wheel off the ground; (b) turning the pedals and shifting into the smallest front chainring and rear cog; (c) turning the mountain bike upside down; (d) flipping open the quick release lever; (e) turning the quick release lever counter-clockwise while holding the nut on the other side; (f) standing behind the mountain bike; (g) placing the first (index) finger of the left hand in front of the guide jockey wheel; (h) placing the thumb of the left hand behind the tension jockey wheel; (i) moving the left first (index) finger backwards and the left thumb backwards to tighten the chain and pull the derailleur out of the way; (j) pulling the wheel up and forward out of the rear dropout with the right hand; and (k) lifting the wheel upward to the right, so that it pulls away from the chain; c. expelling the air from the inner tube by standing the wheel upright on the ground, pushing down and massaging the air out;			

TP	Description	Method	Time	Refs
	d. levering the tire from the rim by: (1) pinching the tire all the way around to help loosen it from the rim; (2) inserting the tire lever between the rim edge and the tire bead in line with a spoke; (3) flipping one side of the tire bead onto the outside of the rim edge; (4) clipping the tire lever onto the spoke using the hook on the opposite end to lock it into place; and (5) repeating Steps 2–4 every two spokes until one of the tire beads is completely free from the rim; e. pulling the inner tube out of the tire; f. locating the source of the hole in the tire by running a cloth around the inside of the tire, feeling for a sharp object protruding into the tire; g. removing the sharp object from the tire, if required; h. locating the puncture in the inner tube by: (1) pumping the inner tube to medium pressure; (2) squeezing the inner tube gently and passing it slowly over an individual's wrist / lips / ear to feel for where the air is escaping; (3) placing the inner tube in water to look for bubbles; and (4) marking the puncture location with a pen; i. patching the puncture in the inner tube by: (1) selecting / cutting a patch into a circle that is 1 cm (1/2 inch) larger than the puncture; (2) roughing up the area around the puncture with sandpaper; (3) brushing away rubber dust; (4) applying adhesive to the area around the puncture; (5) allowing the adhesive to begin to dry until it loses its sheen;			

TP	Description	Method	Time	Refs
	(6) placing the patch firmly on the inner tube; (7) allowing the patch to completely dry (approximately 5 min); and (8) pumping the inner tube to medium pressure to check for any further leakages; j. installing the patched / new inner tube, to include: (1) pumping the inner tube with just enough air to give it shape; (2) pulling back the section of the tire over the valve hole; (3) popping the valve through the valve hole; and (4) starting at the valve stem, working the inner tube into the tire so it is completely tucked in; k. placing the tire back onto the rim by: (1) holding the wheel on the individual's lap; (2) placing the hands on either side of the valve stem with the fingers over the back and the thumbs in the front; (3) working the hands away from each other to pop the tire bead onto the rim by pushing the tire with the thumbs / heels of the hand; and (4) working both sides of the tire bead from side to side to make sure that the tube is not caught under the tire bead; l. inflating the tire to 35–65 psi; m. replacing: (1) the front wheel, and / or (2) the rear wheel; and n. reattaching the brake cable, if required by: (1) squeezing the brake units firmly together; and (2) easing the end of the noodle back onto the hanger.			

TP	Description	Method	Time	Refs
TP 12	Explain, demonstrate and have the cadets replace: a. a brake cable by: (1) unscrewing the lockring holding the cable to the derailleur; (2) unscrewing cable from the brake lever on the handlebar; (3) lining up the new cable with the old cable and cutting it to the appropriate length; (4) installing the new cable through the end cap on the brake lever; (5) following the path of the old cable and installing through the end cap on the derailleur; (6) tightening the lock ring to hold them in place; and (7) pushing the bike forward and engaging the brake leaver to test the new cable; and b. derailleur cable by: (1) shifting to the smallest cog on the rear derailleur and the smallest chain ring on the front derailleur; (2) following the d-cable from the gear leaver to where it enters the derailleur; (3) loosening the bolt that holds the cable to the derailleur; (4) moving to the right shift lever, following the cable to the pulley mechanism near the back gears; (5) loosening the rear derailleur cable; (6) pushing the loosened cables back though the cable housing; (7) grabbing the end of one cable where it pokes out of the gear and pull it all the way out; (8) pushing a new cable though the hole in the right shifter; (9) pulling it through and placing it in the slot on the derailleur where the old cable was;	Demonstration and Performance	15 min	C2-082 (pp. 56–60) C2-084 (pp. 26–29) C2-088 (pp. 48–51)

TP	Description	Method	Time	Refs
	(10) pulling the cable taught and tightening the bolt; (11) cutting the excess cable; and (12) adjusting the derailleur.			

5. **Time**:

a.	Introduction:	10 min
b.	Interactive Lecture:	25 min
c.	Demonstration and Performance:	75 min
d.	Demonstration:	10 min
e.	Total:	120 min

6. **Substantiation**:

a. An interactive lecture was chosen for TPs 1, 2, 4, 7, and 10 to orient the cadets to the components of a mountain bike repair kit, parts of a link in a mountain bike chain, components of a mechanical disc brake, components of the front and rear derailleur, and the parts of a wheel.

b. A demonstration and performance was chosen for TPs 3, 6, 9, 11, and 12 as it allows the instructor to explain and demonstrate splitting and joining a chain, adjusting a mechanical disc brake, adjusting the front and rear derailleur, repairing a flat tire, and replace a cable while providing an opportunity for the cadets to practice each skill under supervision.

c. A demonstration was chosen for TPs 5 and 8 as it allows the instructor to explain and demonstrate how the components of a mechanical disc brake system work together to slow down / stop a mountain bike and how the components of the front and rear derailleur operate while changing gears.

7. **References**:

a. C2-082 ISBN 1-57954-883-0 Downs, T. (2005). *Bicycle maintenance & repair for road & mountain bikes*. USA: Rodale Inc.

b. C2-084 ISBN 1-55297-734-X Allwood, M. (2004). *Mountain bike maintenance: The illustrated manual*. Richmond Hill, ON: Firefly Books Ltd.

c. C2-088 ISBN 1-55297-653-X Crowther, N. (2002). *The ultimate mountain bike book: The definitive illustrated guide to bikes, components, techniques, thrills and trails*. Toronto, ON: Firefly Books Ltd.

d. C2-223 Park Tool. (2008). *Repair how-to's: Front derailleur adjustment*. Retrieved November 30, 2008, from http://www.parktool.com/repair/readhowto.asp?id=75

e. C2-224 Park Tool. (2008). *Repair how-to's: Rear derailleur adjustment*. Retrieved November 30, 2008, from http://www.parktool.com/repair/readhowto.asp?id=64

8. **Training Aids**:

a. Fully equipped mountain bike, and

b. Mountain bike repair kit.

9. **Learning Aids**:

   a. Fully equipped mountain bike, and

   b. Mountain bike repair kit.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 4 (S452.02 EC).

11. **Remarks**:

   a. The mountain bike repair kit will include:

      (1) spare tube,

      (2) tube patch kit,

      (3) tire levers,

      (4) bike multi-tool, to include:

         (a) 2-, 2.5-, 3-, 4-, 5-, 6- and 8-mm hex keys,

         (b) chain tool,

         (c) flat-head screwdriver,

         (d) Phillips screwdriver,

         (e) T-25 Torx spoke key,

         (f) spoke wrenches, and

         (g) 8- and 10-mm open wrenches, and

      (5) mini pump with gauge.

   b. Cadets will complete this EO in the training group established in EO S452.01 (Prepare for Mountain Biking).

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EO S452.03

1. **Performance**: Perform Mountain Biking Skills on Novice Trails

2. **Conditions**:

   a. Given:

      (1) Fully equipped mountain bike,

      (2) Helmet,

      (3) Water carrier,

      (4) Day pack,

      (5) Whistle,

      (6) Group mountain bike equipment,

      (7) Supervision, and

      (8) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Novice trails, IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours.

3. **Standard**: The cadet shall:

   a. complete a pre-ride check using the ABC Quick Check method, to include:

      (1) air,

      (2) brakes,

      (3) chain and crank,

      (4) quick release, and

      (5) final check;

   b. perform mountain biking skills on novice trails; and

   c. complete a post-ride check.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Demonstrate and have the cadets: a. select a helmet, b. adjust a helmet, and	Demonstration and Performance	15 min	C2-088 (pp. 22–23, p. 32) C2-089

TP	Description	Method	Time	Refs
	c. size a mountain bike, to include: (1) size by eye, (2) stand-over test, and (3) saddle adjustment.			
TP2	Explain, demonstrate and have the cadets practice the procedure for completing a pre-ride bike check using the ABC Quick Check method, to include: a. air, to include: (1) tire air pressure, (2) wear on the tread or cuts on the sidewall, (3) true wheels, (4) looseness in the ball bearings in the hub; b. brakes and bars, to include: (1) brake levers, (2) brake function, (3) headset, and (4) handlebars; c. chain and crank, to include: (1) lubrication, and (2) pedals; d. quick release, to include: (1) wheel, and (2) saddle; and e. final check.	Demonstration and Performance	15 min	C2-088 (p. 36, p. 37) C2-089
TP3	Explain, demonstrate and have the cadets practice mountain biking skills, to include: a. braking; b. shifting gears; c. ascending hills; and d. descending hills.	Demonstration and Performance	30 min	C2-087 (p. 40, p.42) C2-088 (p. 104–113) C2-092
TP4	Conduct a mountain bike ride on novice trails where the cadets will practice: a. braking; b. shifting gears; c. ascending hills; and d. descending hills.	Practical Activity	160 min	

TP	Description	Method	Time	Refs
TP5	Explain, demonstrate and have the cadets complete a post-ride bike check, to include: a. cleaning, to include: (1) removal of mud and dirt from the gears and braking system; and (2) removal of debris from the frame; b. lubricating, to include: (1) chain, (2) cables, and (3) derailleur; and c. assessing for repairs, to include: (1) frayed or damaged cables; (2) unevenness in the cable and lever system of the brakes; (3) cuts in the side wall of the tires; and (4) missing knobs on the tires.	Demonstration and Performance	10 min	C2-088 (pp. 44–45, pp. 52–53)

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Demonstration and Performance:	70 min
c.	Practical Activity:	160 min
d.	Total:	240 min

6. **Substantiation**:

a. A demonstration and performance was chosen for TPs 1–3 and 5 as it allows the instructor to explain and demonstrate selecting and adjusting a mountain bike, the procedure for pre-ride and post-ride checks, and mountain biking skills while providing an opportunity for the cadets to practice each skill under supervision.

b. A practical activity was chosen for TP 4 as it is an interactive way to have the cadets practice mountain biking skills and procedures in a controlled environment in a fun and exciting manner.

7. **References**:

a. C2-088 ISBN 1-55297-653-X Crowther, N. (2002). *The ultimate mountain bike book: The definitive illustrated guide to bikes, components, techniques, thrills and trails*. Toronto, ON: Firefly Books Ltd.

b. C2-089 Ministry of Transport Ontario. (2007). *Young cyclists guide*. Retrieved October 5, 2007, from http://www.mto.gov.on.ca/english/safety/cycling/youngcyclist.htm

c. C2-083 ISBN 0-07-149390-5) Brink, T. (2007). *The complete mountain biking manual*. Camden, ME: Ragged Mountain Press.

d. C2-087 Badyk, M., Buck, K., Sahl, N., Schultz, R., & Vrooman, D. (1998). *ontario learn to mountain bike clinic workbook* (2nd ed.). Ontario Cycling Association and Ontario Recreational Mountain Bicycling Alliance

e. C2-092 Ministry of Transport Ontario. (2007). *Cycling skills: cycling safety for teen and adult cyclists*. Retrieved October 5, 2007, from http://www.mto.gov.on.ca/english/pubs/cycling/cyclingskills.html

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area,

b. Fully equipped mountain bike,

c. Mountain bike repair kit,

d. Helmet,

e. Day pack,

f. Water carrier,

g. Mountain bike group equipment,

h. Lubricant,

i. Gear / masking tape, and

j. Cleaning kit.

9. **Learning Aids**:

a. Fully equipped mountain bike,

b. Mountain bike repair kit,

c. Helmet,

d. Day pack,

e. Water carrier, and

f. Cleaning kit.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 5 S452 PC.

11. **Remarks**:

a. Cadets who have previously completed the Basic Expedition and Expedition Instructor courses may have their skill level assessed and training altered so that more time is given to practice mountain biking skills through a practical activity. Instructors will need to prepare an alternate activity for these cadets.

b. Cadets will complete this EO in the training group established in EO S452.01 (Prepare for Mountain Biking).

EO S452.04

1. **Performance**: Perform Mountain Biking Skills on Intermediate Trails

2. **Conditions**:

   a. Given:

      (1) Fully equipped mountain bike,

      (2) Helmet,

      (3) Water carrier,

      (4) Day pack,

      (5) Whistle,

      (6) Group mountain bike equipment,

      (7) Personal equipment,

      (8) Group equipment,

      (9) Supervision, and

      (10) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Intermediate trails, IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours.

3. **Standard**: The cadet shall:

   a. identify types of obstacles; and

   b. perform advanced mountain biking skills.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Describe mountain biking on intermediate trails, to include: a. defining intermediate trails; b. adopting the appropriate body position, by keeping: (1) the elbows bent and out, (2) the head up, (3) the chin low, (4) the centre of gravity low, and (5) the seat hovering over the saddle; and	Interactive Lecture	10 min	A2-001 C2-083 (pp. 110–111) C2-087 (pp. 43–45) C2-088 (pp. 134–137)

TP	Description	Method	Time	Refs
	c. regulating speed, to include: (1) braking; and (2) gearing; and (3) maintaining control.			
TP2	Have the cadets brainstorm different types of terrain and obstacles that may be encountered when mountain biking on intermediate trails, to include: a. terrain, to include: (1) grass, (2) mud, (3) sand, (4) water, and (5) gravel; and b. obstacles, to include: (1) rocks, (2) roots, (3) logs, (4) ruts, (5) crevices, and (6) potholes.	Group Discussion	10 min	C2-083 (pp. 110–111) C2-087 (pp. 43–45) C2-088 (pp. 134–137)
TP3	Describe mountain biking on: a. grass by: (1) staying in the saddle when ascending hills; (2) selecting a medium to low gear to prevent wheel spin; (3) braking lightly; and (4) being aware of ruts as they will be slippery and may contain water and holes that cannot be seen; b. mud by: (1) staying seated in the saddle; (2) moving the centre of gravity toward the middle of the mountain bike; (3) keeping all actions as smooth as possible;	Interactive Lecture	10 min	C2-083 (pp. 110–111) C2-087 (pp. 43–45) C2-088 (pp. 134–137)

TP	Description	Method	Time	Refs
	(4) shifting into a low gear; and (5) releasing some air from the tire, if possible; c. sand by: (1) keeping the weight off the front wheel by moving the centre of gravity toward the middle of the mountain bike; (2) keeping the handlebars as straight as possible, using the shoulders and upper body to guide the mountain bike rather than steering it; (3) looking and following an already established path when approaching a section of the trail with sand; (4) approaching the sand with a significant amount of speed; (5) shifting into a medium gear; and (6) pedalling as smoothly as possible to stop the wheels from spinning; d. water by: (1) moving the centre of gravity toward the middle of the mountain bike; (2) approaching the water at a medium to high speed to ensure that momentum is maintained throughout the crossing; (3) being aware that under the surface the water could be loose and slippery; (4) keeping a loose but firm grip on the handlebars—executing smooth controlled movements; and (5) pushing / carrying the mountain bike if the depth of the water is unclear; and e. gravel by: (1) keeping actions smooth and controlled; (2) avoiding sudden changes; and (3) braking gently.			

TP	Description	Method	Time	Refs
TP4	Explain, demonstrate and have the cadets perform advanced mountain biking skills, to include: a. log hops by: (1) adopting the ‘attack’ position; (2) shifting the mountain bike into a medium gear; (3) pedalling toward the obstacle at a medium speed and at a right angle; (4) adjusting body position, approximately one metre away from the obstacle by: (a) stopping pedalling; (b) moving the pedals so that they are horizontal; (c) sitting down on the saddle; and (d) shifting the body weight toward the rear of the mountain bike; (5) lifting the front wheel just before reaching the obstacle by: (a) pedalling one half turn; (b) compressing the body toward the ground by pushing down on the front fork and front tire; (c) pushing the hips backwards to shift the centre of gravity; (d) straightening up and pulling up on the handle bars in one fluid motion, while squeezing the saddle with the inner thighs; and (e) moving the weight toward the rear wheel to lift up the front wheel; (6) placing the front wheel on the obstacle; (7) standing up on the pedals and moving the body weight over the handlebars to transfer the centre of gravity from the rear of the mountain bike to the front;	Demonstration and Performance	120 min	C2-083 (pp. 106–109, pp. 124–125) C2-087 (pp. 43–46) C2-088 (pp. 114–117)

TP	Description	Method	Time	Refs
	(8) pushing forward on the handlebars and allowing momentum and pedalling action to roll the mountain bike over the obstacle; (9) moving the body weight toward the rear of the mountain bike as soon as the front wheel hits the ground; (10) allowing the back wheel to roll off the obstacle; and (11) continuing to pedal the bike forward; b. wheelies by: (1) approaching the small, gradual slope in the 'attack' position; (2) shifting the mountain bike into a medium or low gear and begin pedalling at a rolling speed; (3) leaning forward so the body weight is well over the handlebars; (4) turning the pedals so that the dominant leg is in the 11 o'clock position; (5) pedalling hard with the dominant leg, while pulling up and back on the handlebars, shifting the centre of gravity over the back wheel, so that the front wheel lifts off the ground; and (6) leaning back, locate the balance point and continue pedalling for a minimum of six pedal strokes; c. bunny hops by: (1) adopting the ‘attack’ position; (2) shifting the mountain bike into a low or medium gear; (3) pedalling toward the obstacle at a medium speed and at a right angle; (4) adjust body position, approximately one metre away from the obstacle by: (a) moving the pedals so that they are horizontal;			

TP	Description	Method	Time	Refs
	(b) angling the toes of the back foot toward the ground with the knees bent; and (c) leaning the upper body over the handlebars, keeping the centre of gravity forward on the mountain bike; (5) execute a bunny hop just before reaching the obstacle by: (a) compressing the body toward the ground; (b) straightening up and pulling up on the handle bars in one motion, while squeezing the saddle with the inner thighs; (c) moving the weight toward the rear wheel to lift up the front wheel; (d) twisting the wrists forward on the handlebars; (e) pushing down and back and pulling up on the pedals with the feet in one motion to lift the rear wheel up to the same height as the front wheel; and (f) moving over the obstacle; (6) landing the bunny hop once the obstacle has been cleared by allowing both the front and rear wheel to hit the ground at the same time, absorbing the shock of the landing with arms and legs; and (7) continuing to pedal forward; d. track stands by: (1) approaching a gradual slope in a low gear; (2) rolling up the slope until the mountain bike comes to a halt; (3) placing the pedals so that they are horizontal; (4) turning the front wheel slightly away from the forward foot; (5) engaging the front brake, slightly, so that the mountain bike stops;			

TP	Description	Method	Time	Refs
	(6) allowing the mountain bike to roll backwards a few centimetres; (7) placing pressure on the pedals to roll the mountain bike forward; (8) continuing to adjust position by braking, pedalling and reversing until a balance is found; and (9) straightening the handlebars and continue forward; and e. cornering by: (1) keeping the fingers over the brake levers, applying them as necessary; (2) balancing the body between the handlebars and the saddle; (3) moving the inside pedal to the 12 o'clock position; (4) pushing the weight of the body onto the outside leg; (5) bending the inside elbow to pull the body weight forward and inward; (6) bending the inside knee; (7) pressing down on the straight outside leg; and (8) pedalling when the corner has been turned.			
TP5	Conduct a mountain bike ride on intermediate trails where the cadets will practice: a. mountain biking on the following types of terrain, as available: (1) grass, (2) mud, (3) sand, (4) water, and (5) gravel; and b. advanced mountain biking skills, to include: (1) log hops, (2) wheelies, (3) bunny hops, (4) track stands, and (5) cornering.	Practical Activity	640 min	

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Interactive Lecture:	20 min
c.	Group Discussion:	10 min
d.	Demonstration and Performance:	120 min
e.	Practical Activity:	640 min
f.	Total:	800 min

6. **Substantiation**:

a. An interactive lecture was chosen for TPs 1 and 3 to orient the cadets to mountain biking on intermediate trails and different types of terrain.

b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge and experiences about types of terrain and obstacles that may be encountered when mountain biking on intermediate trails. This helps develop a rapport by allowing the instructor to evaluate the cadets' responses in a non-threatening way while helping them refine their ideas. A group discussion also helps the cadets improve their listening skills and develop as a member of a team.

c. A demonstration and performance was chosen for TP 4 as it allows the instructor to explain and demonstrate advanced mountain biking skills while providing an opportunity for the cadets to practice each skill under supervision.

d. A practical activity was chosen for TP 5 as it is an interactive way for the cadets to practice advanced mountain biking skills on intermediate trails in a safe, controlled environment. These activities contribute to the development of mountain biking skills in a fun and challenging setting.

7. **References**:

a. A2-001 A-CR-CCP-951/PT-002 Director Cadets 3. (2006). *Royal Canadian Army Cadets adventure training safety standards*. Ottawa, ON: Department of National Defence.

b. C2-083 ISBN 0-07-149390-5 Brink, T. (2007). *The complete mountain biking* manual. Camden, ME: Ragged Mountain Press.

c. C2-087 Badyk, M., Buck, K., Sahl, N., Schultz, R., & Vrooman, D. (1998).*Ontario learn to mountain bike clinic workbook* (2nd ed.). North York, ON: Ontario Cycling Association and Ontario Recreational Mountain Bicycling Alliance.

d. C2-088 ISBN 1-55297-653-X Crowther, N. (2002). *The ultimate mountain bike book: The definitive illustrated guide to bikes, components, techniques, thrills and trails*. Toronto, ON: Firefly Books Ltd.

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the

b. classroom / training area,

c. Fully equipped mountain bike,

d. Helmet,

e. Day pack,

f. Water carrier,

g. Mountain bike group equipment,

h. Whistle,

i. 2-inch by 4-inch pieces of wood at least 1 m (3 feet) long,

j. Logs (10-15 cm [4-6 inches] in diameter, at least 1 m [3 feet] long),

k. Logs (40-50 cm [15-20 inches] in diameter, between 20-30 cm [8-12 inches] long),

l. Three flat rocks (at least 40-50 cm [15-20 inches] in diameter, no higher than 5 cm [2 inches]),

m. Pylons,

n. Three 2-m lengths of mine tape, and

o. Six tent pegs.

9. **Learning Aids**:

a. Fully equipped mountain bike,

b. Helmet,

c. Day pack,

d. Water carrier,

e. 2-inch by 4-inch pieces of wood at least 1 m (3 feet) long,

f. Logs (10-15 cm [4-6 inches] in diameter, at least 1 m [3 feet] long),

g. Logs (40-50 cm [15-20 inches] in diameter, between 20-30 cm [8-12 inches] long),

h. Three flat rocks (at least 40-50 cm [15-20 inches] in diameter, no higher than 5 cm [2 inches]),

i. Pylons,

j. Three 2-m lengths of mine tape, and

k. Six tent pegs.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 5, S452 PC.

11. **Remarks**:

a. Cadets who have previously completed the Basic Expedition and Expedition Instructor courses may have their skill level assessed and training altered so that more time is given to practice mountain biking skills through a practical activity. Instructors will need to prepare an alternate activity for these cadets.

b. Cadets will complete this EO in the training group established in EO S452.01 (Prepare for Mountain Biking).

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PO S453A

1. **Performance**: Manoeuvre a Canoe on Moving Water

2. **Conditions**:

   a. Given:

      (1) Fully equipped canoe,

      (2) Paddle,

      (3) Helmet,

      (4) Personal floatation device (PFD),

      (5) Wetsuit or dry suit, as required,

      (6) Activity equipment,

      (7) Personal equipment,

      (8) Supervision, and

      (9) Assistance, as required.

   b. Denied: Nil.

   c. Environmental: Class II moving water IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, during daylight hours.

3. **Standard**: The cadet will:

   a. carry out immediate action on capsizing as:

      (1) the paddler by swimming to the safest shoreline; and

      (2) the downstream safety by:

         (a) talking;

         (b) reaching; and

         (c) throwing;

   b. scout a set of rapids by:

      (1) identifying the class of the rapids;

      (2) identifying hazards;

      (3) selecting a route through the rapids;

      (4) identifying the safest shoreline; and

      (5) identifying downstream safety locations;

c. execute an eddy turn:

(1) as the stern paddler by:

(a) controlling speed by communicating with the bow paddler;

(b) angling the canoe to the eddy line at 30–45 degrees, just ahead of the obstacle;

(c) leaning in to the turn;

(d) executing a forward sweep (offside) or a J-stroke (onside) when bow crosses the eddy line; and

(e) executing power strokes to move up to the top of the eddy; and

(2) as the bow paddler by:

(a) maintaining speed, as communicated by the stern paddler;

(b) leaning in to the turn;

(c) executing a cross bow draw (offside) or a duffek (onside) when the bow crosses the eddy line; and

(d) executing power strokes to move to the top of the eddy; and

d. execute an upstream ferry:

(1) as the stern paddler by:

(a) aligning the canoe parallel to the eddy line;

(b) executing power strokes while leaning downstream in the eddy;

(c) steering the canoe so that it enters the current with a closed angle, not to exceed 10 degrees;

(d) opening and closing the angle, as required, using draws and prys;

(e) closing the angle just prior to crossing the eddy line on the opposite shore; and

(f) executing power strokes to cross the eddy on the opposite shore; and

(2) as the bow paddler by:

(a) executing power strokes while leaning downstream in the eddy;

(b) increasing / decreasing strength of power strokes to match the downstream current; and

(c) executing power strokes to cross the eddy on the opposite shore.

4. **Remarks**:

a. This PO is to be provided by technical specialists through a contracted service provider. The contract shall be initiated under the direction of RCSU (Prairie).

b. Only one moving water OAA chosen from PO 453A (Manoeuvre a Canoe on Moving Water) and PO 453B (Manoeuvre a Kayak on Moving Water) shall be completed by the cadet.

c. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*:

(1) a fully equipped tandem canoe is described as having the following safety equipment:

(a) buoyant heaving line or throw bag of not less than 15 m in length,

(b) bailer,

(c) sound signalling device,

(d) spare paddle, and

(e) painter line (bow and stern); and

d. Activity equipment shall consist of the following:

(1) IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*:

(a) first aid kit, and

(b) canoe repair kit,

(2) communication device (eg, cellular phone or hand-held radio),

(3) at least one means of purifying water,

(4) topographical or river map of area as required, and

(5) compass.

e. Personal equipment shall consist of the following:

(1) waterproof day pack,

(2) water carrier,

(3) towel,

(4) swimsuit,

(5) personal essentials, to include:

(a) sunscreen,

(b) bug repellent, and

(c) lip balm.

f. Wetsuits or dry suits are recommended when water temperature is below 10 degrees Celsius.

g. The intensity level of the activity shall follow the progression matrix outlined in A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. This policy limits cadets to Class II moving water. Where Class III water exists, rapids shall be scouted and the skill level of the cadets assessed. Class III water may be attempted with permission of a qualified moving water instructor.

h. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, each cadet must complete a *Declaration of Swimming Ability* prior to participating in canoe training or tripping on-water for more than 30 minutes or travelling greater than 1000 m.

i. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide shall be assigned to each training group.

EO S453A.01

1. **Performance**: Prepare for Canoeing

2. **Conditions**:

   a. Given:

      (1) Fully equipped canoe,

      (2) Paddle,

      (3) Helmet,

      (4) Personal floatation device (PFD),

      (5) Wetsuit or dry suit, as required,

      (6) Activity equipment,

      (7) Personal equipment,

      (8) Supervision, and

      (9) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall prepare for canoeing by:

   a. sizing personal equipment, to include:

      (1) PFD,

      (2) helmet,

      (3) paddle, and

      (4) wetsuit or dry suit;

   b. unloading and loading a canoe from a trailer;

   c. portaging a canoe;

   d. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, outfitting a canoe with safety equipment, to include:

      (1) bailer,

      (2) buoyant heaving line or throw bag,

      (3) sound signalling device,

      (4) spare paddle, and

      (5) painter line (bow and stern); and

e. communicating, using:

(1) paddle signals, and

(2) whistle signals.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Explain and demonstrate and have the cadets load and unload a canoe from a trailer.	Demonstration and Performance	10 min	
TP2	Identify the parts of a canoe, to include: a. bow, b. stern, c. gunwales, d. thwart, e. hull, f. keel, g. bow seat, h. stern seat, i. bow handle, j. stern handle, and k. deck plate.	Interactive Lecture	5 min	C2-077 (pp. 8–9)
TP3	Discuss paddles, to include: a. identifying the parts of the paddle, to include: (1) shaft, (2) grip, (3) throat, (4) blade, to include: (a) power face, and (b) back face; and (5) tip; b. sizing a paddle; and c. holding the paddle.	Interactive Lecture	5 min	C2-076 (p. 21)
TP4	Explain, demonstrate and have the cadets don equipment, to include: a. wetsuit, b. PFD, and c. helmet.	Demonstration and Performance	15 min	A1-010 (p. 1–5, para 16–19)

TP	Description	Method	Time	Refs
TP5	Explain, demonstrate and have the cadets practice portaging a canoe, to include: a. tandem hand carry, and b. tandem portage carry.	Demonstration and Performance	10 min	C0-025 (pp. 45–46)
TP6	Explain, demonstrate and have the cadets practice outfitting a canoe with safety equipment, to include: a. bailer, b. 15-m buoyant heaving line or throw bag, c. sound signaling device, d. spare paddle, and e. painter lines (bow and stern).	Demonstration and Performance	15 min	A2-001 (p. 3-3) C2-078 (pp. 104–105)
TP7	Discuss canoeing safety concerns, to include: a. understanding personal responsibilities, to include: (1) skill level, and (2) physical fitness; b. identifying paddle signals, to include: (1) stop, (2) help required / emergency, (3) raft up, and (4) all clear; and c. identifying whistle signals, to include: (1) universal distress signal, (2) move to shore / raft up, and (3) all clear / look at me.	Interactive Lecture	10 min	C0-025 (p. 200)

5. **Time**:

a. Introduction / Conclusion: 10 min
b. Interactive Lecture: 20 min
c. Demonstration and Performance: 50 min
d. Total: 80 min

6. **Substantiation**:

a. An interactive lecture was chosen for TPs 2, 3 and 7 to generate interest and present basic or background material on canoeing, canoeing equipment and safety procedures.

b. A demonstration and performance was chosen for TPs 1 and 4–6 as it allows the instructor to explain and demonstrate donning equipment, loading and unloading a canoe, portaging a canoe, and outfitting a canoe with safety equipment while providing an opportunity for the cadets to practice under supervision.

7. **References:**

a. A1-010 A-CR-CCP-030/PT-001 Director Cadets 4. (2005). *Water safety orders*. Ottawa, ON: Department of National Defence.

b. A2-001 A-CR-CCP-951/PT-002 Director Cadets 4. (2006). *Royal Canadian Army Cadets adventure training safety standards*. Ottawa ON: Department of National Defence.

c. C0-025 ISBN 1-895465-33-8 Gifford, D. (Ed.) (2000). *Canoeing instructors resource manual*. Merrickville, ON: Canadian Recreational Canoeing Association.

d. C2-076 ISBN 0-87322-443-4 Gullion, L. (1994). *Outdoor pursuits series: Canoeing*. Champaign, IL: Human Kinetics Publishers.

e. C2-077 ISBN 1-55013-654-2 Mason, B. (1995). *Path of the paddle: An illustrated guide to the art of canoeing*. Toronto, ON: Key Porter Books Limited.

f. C2-078 ISBN 1-55013-079-X Mason, B. (1988). *Song of the paddle; An illustrated guide to wilderness camping*. Toronto, ON: Key Porter Books Limited.

8. **Training Aids**:

a. Fully equipped canoe,

b. Paddle,

c. Helmet,

d. PFD,

e. Wetsuit or dry suit, as required,

f. Activity equipment, and

g. Personal equipment.

9. **Learning Aids**:

a. Fully equipped canoe,

b. Paddle,

c. Helmet,

d. PFD,

e. Wetsuit or dry suit, as required,

f. Activity equipment, and

g. Personal equipment.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 6, S453A PC.

11. **Remarks**:

a. Wetsuits or dry suits are recommended when water temperature is below 10 degrees Celsius.

b. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, cadets must complete a *Declaration of Swimming Ability* prior to participating in canoe training or tripping on water for more than 30 minutes or travelling greater than 1000 m.

c. The intensity level of the activity shall follow the progression matrix outlined in A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*.

d. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide shall be assigned to each training group.

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EO S453A.02

1. **Performance**: Paddle a Canoe on Flatwater

2. **Conditions**:

   a. Given:

      (1) Fully equipped canoe,

      (2) Paddle,

      (3) Helmet,

      (4) Personal floatation device (PFD),

      (5) Wetsuit or dry suit, as required,

      (6) Activity equipment,

      (7) Personal equipment,

      (8) Supervision, and

      (9) Assistance, as required.

   b. Denied: Nil.

   c. Environmental: Flatwater IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, during daylight hours.

3. **Standard**: The cadet shall:

   a. launch a canoe;

   b. land a canoe;

   c. perform canoe strokes, to include:

      (1) power stroke,

      (2) J-stroke,

      (3) forward sweep,

      (4) reverse sweep,

      (5) draw,

      (6) pry,

      (7) low brace,

      (8) jam,

      (9) back paddle,

      (10) cross bow draw, and

      (11) duffek; and

d. execute canoe manoeuvres, to include:

(1) paddling forward in the stern;

(2) back paddling in the bow;

(3) pivoting the canoe;

(4) sideslipping in both directions;

(5) turning; and

(6) stopping.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Explain, demonstrate and have the cadets: a. launch a canoe, to include: (1) identifying a safe location on the water; (2) entering the canoe; and (3) moving away from the shoreline; and b. landing the canoe, to include: (1) reaching the shoreline; (2) exiting the canoe; and (3) securing the canoe on / to the shore.	Demonstration and Performance	10 min	C0-025 (p. 47) C2-112
TP2	Explain and demonstrate the action to take on capsizing, to include: a. identifying of the priorities of rescue, to include: (1) rescuer, (2) people, (3) canoes, and (4) equipment; and b. executing a canoe over canoe assisted rescue.	Demonstration	30 min	C0-025 (pp. 22–25) C2-076 (pp. 67–68)
TP3	Explain, demonstrate and have the cadets: a. perform canoe strokes, to include: (1) power stroke, (2) J-stroke, (3) forward sweep, (4) reverse sweep, (5) draw,	Demonstration and Performance	50 min	C0-025 (pp. 53–55, p. 60, pp. 64–68, p. 99) C2-076 (pp. 40–49, pp. 56–60) C2-106 (pp. 127–131)

TP	Description	Method	Time	Refs
	(6) pry, (7) low brace, (8) jam, (9) back paddle, (10) cross bow draw, and (11) duffek.			C2-114 (pp. 116–117, pp. 110–111)
TP4	Explain, demonstrate and have the cadets execute canoe manoeuvres: a. in the stern, to include: (1) paddling forward in a straight line by performing the following canoe stokes, to include: (a) power stroke, (b) J-stroke, and (c) forward sweep; (2) turning by performing the following canoe stokes, to include: (a) J-stroke, or (b) forward sweep; b. in the bow, to include: (1) turning by performing the following canoe stokes, to include: (a) draw, (b) forward sweep, or (c) cross bow draw; c. in tandem with a canoe partner, to include: (1) pivoting by performing the following canoe stokes, to include: (a) draw, or (b) pry; (2) sideslipping in both directions by performing the following canoe stokes, to include: (a) draw, and (b) pry; (3) back paddling; and (4) stopping by performing a jam.	Demonstration and Performance	100 min	C0-025 (pp. 53–55, p. 60, pp. 64–68, p. 99) C2-076 (pp. 40–49, pp. 56–60) C2-106 (pp. 127–131) C2-114 (pp. 116–117, pp. 110–111)

TP	Description	Method	Time	Refs
TP5	Have the cadets practice canoe strokes and manoeuvres while participating in on-water activities, to include: a. obstacle courses, b. mini games, or c. on lake tripping.	Practical Activity	160 min	

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Demonstration and Performance:	160 min
c.	Demonstration:	30 min
d.	Practical Activity:	160 min
e.	Total:	360 min

6. **Substantiation**:

a. A demonstration and performance was chosen for TPs 1, 3 and 4 as it allows the instructor to explain and demonstrate the canoe-over-canoe assisted rescue, basic canoe strokes, and canoe manoeuvres while providing an opportunity for the cadets to practice under supervision.

b. A demonstration was chosen for TP 2 as it allows the instructor to explain and demonstrate launching / landing a canoe in a controlled environment.

c. A practical activity was chosen for TP 5 as it is an interactive way for the cadets to practice canoeing skills on flatwater.

7. **References**:

a. C0-025 ISBN 1-895465-33-8 Gifford, D. (Ed.) (2000). *Canoeing instructors resource manual*. Merrickville, ON: Canadian Recreational Canoeing Association.

b. C2-076 ISBN 0-87322-443-4 Gullion, L. (1994). *Outdoor pursuits series: Canoeing*. Champaign, IL: Human Kinetics Publishers.

c. C2-106 ISBN 0-900082-04-6 Rowe, R. (1997). *Canoeing handbook*. Guildford, UK: Biddles Limited.

d. C2-112 ISBN 1-55046377-2 McGuffin, G. & McGuffin, J. (2005). *Paddle your own canoe: An illustrated guide to the art of canoeing*. Erin, ON: The Boston Mills Press.

e. C2-114 ISBN 978-1-896980-24-4 Westwood, A. (2007). *Canoeing: The essential skills and safety*. Beachberg, ON: The Heliconia Press.

8. **Training Aids**:

a. Fully equipped canoe,

b. Paddle,

c. Helmet,

d. PFD,

e. Wetsuit or dry suit, as required,

f. Activity equipment,

g. Personal equipment, and

h. Canoe courses.

9. **Learning Aids**:

a. Fully equipped canoe,

b. Paddle,

c. Helmet,

d. PFD,

e. Wetsuit or dry suit, as required,

f. Activity equipment,

g. Personal equipment, and

h. Canoe courses.

10. **Test Details:** EO is assessed IAW Chapter 3, Annex B, Appendix 6, S453A PC.

11. **Remarks**:

a. Wetsuits or dry suits are recommended when water temperature is below 10 degrees Celsius.

b. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, cadets must complete a *Declaration of Swimming Ability* prior to participating in canoe training or tripping on water for more than 30 minutes or travelling greater than 1000 m.

c. The intensity level of the activity shall follow the progression matrix outlined in A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*.

d. Cadets will complete this EO in the training group established in EO S453A.01 (Prepare for Canoeing).

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EO S453A.03

1. **Performance**: Paddle a Canoe on Moving Water

2. **Conditions**:

   a. Given:

      (1) Fully equipped canoe,

      (2) Paddle,

      (3) Helmet,

      (4) Personal floatation device (PFD),

      (5) Wetsuit or dry suit, as required,

      (6) Activity equipment,

      (7) Personal equipment,

      (8) Supervision, and

      (9) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Class II moving water IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, during daylight hours.

3. **Standard**: The cadet shall:

   a. scout a set of rapids by:

      (1) identifying the class of the rapids;

      (2) identifying hazards;

      (3) selecting a route through the rapids;

      (4) identifying the safest shoreline; and

      (5) identifying downstream safety locations;

   b. carry out immediate action on capsizing as:

      (1) the paddler by swimming to the safest shoreline; and

      (2) the downstream safety by:

         (a) talking;

         (b) reaching; and

         (c) throwing;

   c. execute an eddy turn:

      (1) as the stern paddler; and

      (2) as the bow paddler; and

d. execute an upstream ferry:

(1) as the stern paddler; and

(2) as the bow paddler.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Identify the levels of the International Scale of River Difficulty (ISRD), to include: a. Class I (easy), b. Class II (novice), c. Class III (intermediate), d. Class IV (advanced), e. Class V (expert), and f. Class VI (extreme and exploratory).	Interactive Lecture	5 min	A1-010 (pp. 5-21 to 5-22) C2-077 (p. 76) C2-112 (p. 116) C2-221 (p. 20)
TP2	Discuss moving water, to include: a. defining the term rapid(s); and b. understanding the flow of water downstream, to include: (1) volume, and (2) current, to include: (a) middle of the river, (b) river left / river right, (c) river bends, (d) helical currents, and (e) current differential. Note: This TP should be conducted while in view of the river—not all features will be visible at the same time. Find appropriate locations, as required.	Interactive Lecture	15 min	C2-077 (pp. 60–63) C2-112 (pp. 119–125)
TP3	Identify and explain the following river features: a. confluence, b. channel, c. chute, d. downstream V, e. upstream V, f. eddy, g. eddy line, h. pool,	Interactive Lecture	15 min	C2-077 (pp. 65–73) C2-112 (pp. 119–125) C2-221 (pp. 13–20)

TP	Description	Method	Time	Refs
	i. boil, and j. drop. Note: This TP should be conducted while in view of the river—not all features will be visible at the same time. Find appropriate locations, as required.			
TP4	Identify and explain the following river hazards: a. rock(s), to include: (1) rock(s) in deep, quiet or slow-moving water, (2) rock(s) in slow current, (3) rock(s) in deep water with a fast current, and (4) rock(s) in deep water with a very fast current; b. rock gardens, c. undercut rocks, d. holes, to include: (1) frowning holes, (2) smiling holes, and (3) stoppers; e. potholes, f. ledge(s), g. low head dam or man-made weir, h. waterfall, and i. strainers / sweepers. Note: This TP should be conducted while in view of the river—not all features will be visible at the same time. Find appropriate locations, as required.	Interactive Lecture	15 min	C2-077 (pp. 65–73) C2-112 (pp. 119–125)
TP5	Identify and explain the following types of waves: a. curling waves, b. standing waves / haystacks, c. roller waves, d. re-circulating waves / hydraulics, to include: (1) non-keepers, and (2) keepers.	Interactive Lecture	10 min	C2-077 (pp. 65–73) C2-112 (pp. 119–125)

TP	Description	Method	Time	Refs
	Note: This TP should be conducted while in view of the river—not all features will be visible at the same time. Find appropriate locations, as required.			
TP6	Have the cadets, in groups of four, scout a set of rapids by: a. identifying the class of the rapids; b. identifying hazards; c. selecting a route through the rapids; d. identifying the safest shoreline; and e. identifying downstream safetly locations.	Practical Activity	20 min	
TP7	Explain, demonstrate and have the cadets practice throwing a throw bag to rescue a swimmer by: a. taking position in full sight of the river; b. adopting the throwing position with the feet shoulder width apart and firmly planted on the ground; c. holding the throw bag in the throwing hand and the line in the opposite hand; d. watching for the swimmer to pass the rescue location; e. calling out ROPE; f. aiming the throw bag so that the rope will land just downstream of the swimmer; g. throwing the throw bag underhanded with a smooth, steady action; h. bracing for the weight of the swimmer on the rope; and i. swinging the swimmer to shore, pulling in the rope, as required.	Demonstration and Performance	30 min	C2-112 (pp. 184–185) C2-212 (p. 74)
TP8	Explain, demonstrate and have the cadets complete a self-rescue and an assisted rescue in moving water by: a. adopting the defensive swimming position by: (1) rolling onto the back; (2) pointing the feet downstream; (3) positioning the left heel on top of the right toes with the right heel just below the buttocks; (4) tilting the head upward;	Demonstration and Performance	80 min	C2-112 (p. 180, pp. 184–185) C2-212 (p. 36)

TP	Description	Method	Time	Refs
	(5) griping the teeth together in a ‘river smile’; and (6) positioning the arms out toward the sides to provide stability and direction; b. completing a self-rescue by: (1) adopting the defensive swimming position; (2) backpaddling with the arms; (3) kicking the feet, as required; (4) angling the body toward the safest shore / eddy; and (5) backpaddling to the safest shore / eddy; and c. completing an assisted rescue by: (1) adopting the defensive swimming position; (2) swimming defensively toward the safest shore; (3) grabbing the rescue line that is thrown in front of the swimmers body; (4) placing the rope over the shoulder closest to the safest shore; and (5) kicking the feet to assist the rescuer, as required.			
TP9	Explain, demonstrate and have the cadets perform canoe manoeuvres in moving water on the onside and offside, to include: a. executing an eddy turn: (1) as the stern paddler by: (a) communicating with the bow paddler to control the speed; (b) angling the canoe to the eddy line at 30–45 degrees, just ahead of the obstacle; (c) leaning in to the turn;	Demonstration and Performance	160 min	C2-077 (pp. 78–88) C2-112 (pp. 146–153, pp. 158–161) C2-222

TP	Description	Method	Time	Refs
	(d) executing a forward sweep (offside) or a J-stroke (onside) when bow crosses the eddy line; and (e) executing power strokes to move up to the top of the eddy; and (2) as the bow paddler by: (a) maintaining speed, as communicated by the stern paddler; (b) leaning in to the turn; (c) executing a cross bow draw (offside) or a duffek (onside) when the bow crosses the eddy line; and (d) executing power strokes to move to the top of the eddy; and b. executing an upstream ferry: (1) as the stern paddler by: (a) aligning the canoe parallel to the eddy line; (b) executing power strokes while leaning downstream in the eddy; (c) steering the canoe so that it enters the current with a closed angle, not to exceed 10 degrees; (d) opening and closing the angle, as required, using draws and prys; (e) closing the angle just prior to crossing the eddy line on the opposite shore; and (f) executing power strokes to cross the eddy on the opposite shore; and			

TP	Description	Method	Time	Refs
	(2) as the bow paddler by: (a) executing power strokes while leaning downstream in the eddy; (b) increasing / decreasing strength of power strokes to match the downstream current; and (c) executing power strokes to cross the eddy on the opposite shore.			
TP10	Have the cadets paddle a canoe on moving water by: a. scouting sets of rapids; b. choosing lines to run; c. employing paddle and whistle signals, where appropriate; and d. executing canoeing manoeuvres.	Practical Activity	720 min	

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Interactive Lecture:	60 min
c.	Demonstration and Performance:	270 min
d.	Practical Activity:	740 min
e.	Total:	1080 min

6. **Substantiation**:

a. An interactive lecture was chosen for TPs 1–5 to orient the cadets to the concept of moving water as well as features, obstacles and waves they may encounter when paddling.

b. A practical activity was chosen for TPs 6 and 10 as it is an interactive way for the cadets to practice canoeing skills on moving water.

c. A demonstration and performance was chosen for TPs 7–9 as it allows the instructor to explain and demonstrate self and assisted rescues, moving water canoe strokes and moving water canoe manoeuvres while providing the cadets the opportunity to practice these skills under supervision.

7. **References**:

a. A1-010 A-CR-CCP-030/PT-001 D Cdts 4. (2005). *Water safety orders*. Ottawa, ON: Department of National Defence.

b. C2-077 ISBN 1-55013-654-2 Mason, B. (1995). *Path of the paddle: An illustrated guide to the art of canoeing*. Toronto, ON: Key Porter Books.

c. C2-112 ISBN 1-55048-377-2 McGuffin, G., & McGuffin J. (1999). *Paddle your own canoe: An illustrated guide to the art of canoeing*. Richmond Hill, ON: The Boston Mills Press.

d. C2-114 ISBN 978-1-896980-04-6 Westwood, A. (2007). *Canoeing: The essential skills and safety*. Beachburg, ON: The Heliconia Press.

e. C2-212 Segerstrom, J., Edwards, B., Hogan, M., Turnball, P., & Turnball J. M. (2001). *Rescue 3 international's whitewater rescue technician manual*. Elk Grove, CA: Rescue 3 International, Inc.

f. C2-221 Drought, G. (1996). *Madawaska river and opeongo river whitewater guide*. Whitney, ON: The Friends of Algonquin Park.

g. C2-222 Salins, S. (2000, March). Ferry on home. *Canoe & kayak*, 30.

h. C2-222 Salins, S. (2000, May). Doing the ferry. *Canoe & kayak*, 34.

i. C2-222 Salins, S. (2000, July). Elements of an eddy turn. *Canoe & kayak*, 34.

j. C2-222 Salins, S. (2000, March). Setting up an eddy turn. *Canoe & kayak*, 22.

8. **Training Aids**:

a. Fully equipped canoe,

b. Paddle,

c. Helmet,

d. PFD,

e. Wetsuit or dry suit, as required,

f. Activity equipment,

g. Personal equipment, and

h. Topographical / river map of the area.

9. **Learning Aids**:

a. Fully equipped canoe,

b. Paddle,

c. Helmet,

d. PFD,

e. Wetsuit or dry suit, as required,

f. Activity equipment,

g. Personal equipment, and

h. Topographical / river map of the area.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 6, S453A PC.

11. **Remarks**:

a. Wetsuits or dry suits are recommended when water temperature is below 10 degrees Celsius.

b. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, cadets must complete a *Declaration of Swimming Ability* prior to participating in canoe training or tripping on-water for more than 30 minutes or travelling greater than 1000 m.

c. The intensity level of the activity shall follow the progression matrix outlined in A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. These policies outlined limit the cadets to Class II moving water. Where Class III water exists, rapids shall be scouted and the skill level of the cadets assessed. Class III water may be attempted with permission of a qualified moving water instructor.

d. Cadets will complete this EO in the training group established in EO S453A.01 (Prepare for Canoeing).

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PO S453B

1. **Performance**: Manoeuvre a Kayak on Moving Water

2. **Conditions**:

   a. Given:

      (1) Fully equipped kayak,

      (2) Paddle,

      (3) Helmet,

      (4) Personal floatation device (PFD),

      (5) Wetsuit or dry suit as required,

      (6) Activity equipment,

      (7) Personal equipment,

      (8) Supervision, and

      (9) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Class II moving water IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, during daylight hours.

3. **Standard**: The cadet will manoeuvre a kayak on moving water, to include:

   a. carrying out action on capsizing as:

      (1) the paddler by completing a wet exit and swimming to the safest shoreline; and

      (2) downstream safety by:

         (a) talking;

         (b) reaching; and

         (c) throwing;

   b. scouting a set of rapids by:

      (1) identifying the class of the rapids;

      (2) identifying hazards;

      (3) selecting a route through the rapids;

      (4) identifying the safest shoreline; and

      (5) identifying downstream safety locations;

   c. executing an eddy turn by:

      (1) building speed until the kayak is travelling faster than the current;

      (2) angling the kayak to the eddy line at 30–45 degrees, just ahead of the obstacle;

(3) executing a low brace U-turn in the direction of the eddy to initiate the turn;

(4) edging the kayak in the direction of the turn;

(5) executing a reverse sweeping low brace while continuing to edge; and

(6) executing power strokes after turning; and

d. executing an upstream ferry by:

(1) shifting the hips to angle the kayak in the direction of the current to edge downstream;

(2) executing forward strokes to build speed;

(3) continuing to edge downstream while paddling across the current;

(4) executing power strokes to maintain forward momentum;

(5) adjusting the angle of the kayak as necessary; and

(6) shifting the hips to recover once in the eddy.

4. **Remarks**:

a. This PO is to be provided by technical specialists through a contracted service provider. The contract shall be initiated under the direction of RCSU (Prairie).

b. Only one moving water OAA chosen from PO 453A (Manoeuvre a Canoe on Moving Water) and PO 453B (Manoeuvre a Kayak on Moving Water) shall be completed by the cadet.

c. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*:

(1) a fully equipped kayak is described as having the following safety equipment:

(a) buoyant heaving line or throw bag of not less than 15 m in length,

(b) bailer,

(c) sound signalling device,

(d) floatation bags (or watertight compartments), and

(e) spray skirt.

d. Activity equipment shall consist of the following:

(1) IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*:

(a) first aid kit, and

(b) kayak repair kit,

(2) communication device (eg, cellular phone or hand-held radio),

(3) at least one means of purifying water,

(4) topographical or river map of area (if required), and

(5) compass.

e. Personal equipment shall consist of the following:

(1) waterproof day pack,

(2) water carrier,

(3) towel,

(4) swimsuit,

(5) personal essentials, to include:

(a) sunscreen,

(b) bug repellent, and

(c) lip balm.

f. Wetsuits or dry suits are recommended when water temperature is below 10 degrees Celsius.

g. The intensity level of the activity shall follow the progression matrix outlined in A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. This policy limits cadets to Class II moving water. Where Class III water exists, rapids shall be scouted and the skill level of the cadets assessed. Class III water may be attempted with permission of a qualified moving water instructor.

h. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, each cadet must complete a *Declaration of Swimming Ability* prior to participating in kayak training or tripping on-water for more than 30 minutes or travelling greater than 1000 m.

i. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide shall be assigned to each training group.

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EO S453B.01

1. **Performance**: Prepare for Kayaking

2. **Conditions**:

   a. Given:

      (1) Fully equipped kayak,

      (2) Paddle,

      (3) Helmet,

      (4) Personal floatation device (PFD),

      (5) Wetsuit or dry suit as required,

      (6) Activity equipment,

      (7) Personal equipment,

      (8) Supervision, and

      (9) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall prepare for kayaking by:

   a. unloading and loading a kayak from a trailer;

   b. sizing personal equipment, to include:

      (1) wetsuit or dry suit,

      (2) PFD,

      (3) helmet, and

      (4) spray skirt;

   c. portaging a kayak;

   d. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, outfitting a kayak with safety equipment, to include:

      (1) bailer,

      (2) 15-m buoyant heaving line or throw bag,

      (3) sound signalling device,

      (4) floatation bag, and

      (5) spray skirt;

e. communicating, using:

(1) paddle signals, and

(2) whistle signals.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Explain, demonstrate and have the cadets load and unload a kayak from a trailer.	Demonstration and performance	10 min	
TP2	Identify the parts of a kayak, to include: a. hull, b. deck, c. bow, d. stern, e. cockpit, f. coaming, g. grab loops, h. security bars, i. foot pegs, j. bulkhead, k. thigh hooks, l. back band, m. support wall, n. drain plug, and o. sidewalls.	Interactive Lecture	5 min	C2-302 (p. 16)
TP3	Discuss paddles, to include: a. construction materials, to include: (1) plastic, (2) fiberglass, and (3) carbon fibre; b. parts of the paddle, to include: (1) shaft, (2) grip, (3) throat, (4) blade, to include: (a) power face, and (b) back face;	Interactive Lecture	5 min	C2-302 (pp. 19–20, pp. 38–39) C2-303 (p. 23)

TP	Description	Method	Time	Refs
	(5) tip; and (6) ferrule, if available; and c. types of blades, to include: (1) feathered, and (2) non-feathered.			
TP4	Explain, demonstrate and have the cadets: a. size a paddle; and b. hold a paddle.	Demonstration and Performance	5 min	C2-302 (pp. 19–20, pp. 38–39) C2-303 (p. 23)
TP5	Explain, demonstrate and have the cadets size and don equipment, to include: a. wetsuit, b. PFD, c. helmet, and d. spray skirt.	Demonstration and performance	15 min	
TP6	Explain, demonstrate and have the cadets practice portaging a kayak by: a. standing in-line with the middle of the kayak facing toward the cockpit; b. grabbing the inside rim of the cockpit with both hands; c. lifting the kayak so that the base of the hull rests on the thigh; d. reaching across the cockpit and grabbing the furthest inside rim with the dominant hand; e. lifting the kayak up with the knee onto the same shoulder as the dominant hand; and f. resting the cockpit rim on the shoulder strap of the PFD.	Demonstration and Performance	10 min	C2-302 (pp. 32–33)
TP7	Explain and demonstrate and have the cadets practice outfitting a kayak with safety equipment, to include: a. bailer, b. 15-m buoyant heaving line or throw bag, c. sound signaling device, d. floatation bag, and e. tow line.	Demonstration and Performance	10 min	C2-302 (pp. 26–27)

TP	Description	Method	Time	Refs
TP8	Discuss safety concerns while kayaking, to include: a. understanding personal responsibilities, to include: (1) skill level, and (2) physical fitness; b. identifying paddle signals, to include: (1) stop, (2) help required / emergency, and (3) all clear; and c. identifying whistle signals, to include: (1) universal distress signal, (2) move to shore, and (3) all clear / look at me.	Interactive Lecture	10 min	C0-025 (p. 200) C2-302 (p. 215) C2-303 (p. 145)

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Demonstration and Performance:	50 min
c.	Interactive Lecture:	20 min
d.	Total:	80 min

6. **Substantiation**:

a. A demonstration and performance was chosen for TPs 1, and 4–7 as it allows the instructor to explain and demonstrate unloading a kayak, sizing a paddle, donning equipment, portaging a kayak and how to outfit a kayak with safety equipment while providing an opportunity for the cadets to practice under supervision.

b. An interactive lecture was chosen for TPs 2, 3 and 8 to generate interest and present basic or background material on kayaking, kayaking equipment and safety procedures.

7. **References**:

a. C0-025 ISBN 1-895465-33-8 Gifford, D. (Ed.) (2000). *Canoeing instructors resource manual*. Merrickville, ON: Canadian Recreational Canoeing Association.

b. C2-302 ISBN 978-1-896980-30-0 Whiting, K., Varette, K. (2008). *White water kayaking: The ultimate guide* (2nd Ed). Beachburg, ON: The Heliconia Press.

c. C2-303 ISBN 978-1-55046-464-1 McGuffin, G. & McGuffin, J. (2008). *Paddle your own kayak: An illustrated guide to the art of kayaking*. Erin, ON: The Boston Mills Press.

8. **Training Aids**:

a. Fully equipped kayak,

b. Paddle,

c. Helmet,

d. PFD,

e. Wetsuit or dry suit, as required,

f. Activity equipment, and

g. Personal equipment.

9. **Learning Aids**:

a. Fully equipped kayak,

b. Paddle,

c. Helmet,

d. PFD,

e. Wetsuit or dry suit, as required,

f. Activity equipment, and

g. Personal equipment.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 7, S453B PC.

11. **Remarks**:

a. Wetsuits or dry suits are recommended when water temperature is below 10 degrees Celsius.

b. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, each cadet must complete a *Declaration of Swimming Ability* prior to participating in kayak training or tripping on-water for more than 30 minutes or travelling greater than 1000 m.

c. The intensity level of the activity shall follow the progression matrix outlined in A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*.

d. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide shall be assigned to each training group.

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EO S453B.02

1. **Performance**: Paddle a Kayak on Flatwater

2. **Conditions**:

   a. Given:

      (1) Fully equipped kayak,

      (2) Paddle,

      (3) Helmet,

      (4) Personal floatation device (PFD),

      (5) Wetsuit or dry suit, as required,

      (6) Activity equipment,

      (7) Personal equipment,

      (8) Supervision, and

      (9) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Flatwater IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, during daylight hours.

3. **Standard**: The cadet shall:

   a. enter a kayak;

   b. launch a kayak;

   c. carry out action on capsizing as the paddler, to include:

      (1) completing a wet exit and swimming to the safest shoreline; and

      (2) righting the kayak using a T-rescue;

   d. perform kayak strokes, to include:

      (1) forward sweep,

      (2) reverse sweep,

      (3) forward stroke,

      (4) power forward,

      (5) back paddle,

      (6) low brace,

      (7) high brace, and

      (8) draw;

e. execute kayak manoeuvres, to include:

(1) paddling forward in a straight line;

(2) backpaddling in a straight line;

(3) performing a low brace U-turn; and

(4) performing a high brace U-turn;

f. land a kayak; and

g. exit a kayak.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Explain, demonstrate and have the cadets: a. launch a kayak by: (1) identifying a safe location near or on the water; (2) entering a kayak by: (a) loosening the back band; (b) sliding the lower body into the cockpit; (c) keeping the legs straight for as long as possible; (d) twisting the lower body to get each leg under the respecting thigh hook; and (e) tightening the back band; (3) attaching the spray skirt to the kayak by: (a) wetting the spray skirt to soften the neoprene; (b) reaching back and tucking the edge of the spray skirt around the coaming; (c) working the spray skirt forward with each hand until reaching the hips; (d) pinning the spray skirt down with the forearms; (e) stretching the front of the spray skirt over the front of the coaming;	Demonstration and Performance	15 min	C2-302 (pp. 34–37) C2-303 (p. 29, pp. 48–51)

TP	Description	Method	Time	Refs
	(f) sliding the remainder of the spray skirt over the sides of the coaming; and (g) ensuring that the grab loop is on the outside of the spray skirt; (4) using the upper body to push the kayak into the water; b. land a kayak at a shoreline by: (1) reaching the shoreline; and (2) exiting a kayak by: (a) pulling on the grab loop of the spray skirt; (b) loosening the back bands; (c) placing the hands on the kayak in line with the hips; (d) pushing down and back on the kayak keeping the legs straight; and (e) stepping out of the kayak; and (3) securing the kayak on shore.			
TP2	Explain, demonstrate and have the cadets practice actions on capsizing, to include: a. identifying the priorities of rescue, to include: (1) rescuer, (2) people, (3) kayaks, and (4) equipment; b. completing a wet exit by: (1) tucking the body forward while upside down to protect the face and body; (2) pulling on the grab loop of the spray skirt; (3) moving the hands inline with the hips; (4) pushing down and forward while leaning into the kayak to pull the legs free of the kayak; and (5) pulling the kayak and paddle to shore;	Demonstration and Performance	50 min	C2-302 (p. 42, pp.217–218) C2-303 (p. 112, p. 130)

TP	Description	Method	Time	Refs
	(6) draining the kayak by: (a) unscrewing the drain plug at the back of the kayak while it is overturned; (b) lifting the bow so the water rushes to the stern; and (c) raising the bow as high as possible to allow all the water to drain; and c. righting the kayak using a T-rescue by: (1) tucking the body forward while upside down to protect the face and body; (2) reaching to the surface with both hands, one on each side of the kayak; (3) slapping the bottom of the kayak five times; (4) grasping the bow of the rescuer's kayak with the closest hand; and (5) rotating the hips to right the kayak.			
TP3	Explain and demonstrate how to right the kayak using a sweep role by: a. establishing the setup position before capsizing by: (1) laying the paddle along the side of the kayak running parallel; and (2) keeping the knuckles down and the power face up on the same plane as the hull, slightly turned out; b. tipping over by lifting the opposite knee; c. sweeping across the surface of the water applying downward pressure; d. keeping the blade at the surface of the water maintaining the climbing angle; e. using the knee closest to the water to lift up and hip snap to roll the kayak upright; and f. ensuring that the head the last to come up once the kayak is upright.	Demonstration	10 min	C2-303 (pp. 116–117)

TP	Description	Method	Time	Refs
TP4	Identify and explain the three golden rules to paddling, to include: a. independent body movement—allowing the upper body to move independently from the bottom; b. core power—using the rotational power of the torso rather that just the arms; and c. continuous strokes, to include: (1) maintaining control with an active blade; and (2) performing a stroke immediately following the last.	Interactive Lecture	10 min	C2-302 (pp. 43–44)
TP5	Explain and demonstrate paddling posture, to include: a. lateral balance, to include: (1) separating the upper and lower body; (2) allowing the hips to move while the upper body stays stationary to maintain balance; and (3) edging the kayak while performing turns and manoeuvres by making a J with the upper and lower body; b. body position, to include: (1) aggressive—strong forward lean; (2) neutral—sitting up straight; and (3) defensive—slightly leaning back; and c. paddlers box, to include: (1) keeping hands and paddle in front of the shoulders; and (2) reaching to the back of the kayak, ensure to rotate the hips maintaining the paddlers box.	Demonstration	10 min	C2-302 (pp. 45–48) C2-303 (p. 54, p. 59)
TP6	Explain, demonstrate and have the cadets: a. perform kayak strokes, to include: (1) forward sweep, (2) reverse sweep, (3) forward stroke, (4) power forward, (5) back paddle, (6) low brace,	Demonstration and Performance	125 min	C2-302 (pp. 52–78, pp. 110–118) C2-303 (pp. 60–94)

TP	Description	Method	Time	Refs
	(7) high brace, and (8) draw; b. execute kayak manoeuvres, to include: (1) paddling forward in a straight line by performing the following strokes: (a) forward sweep, (b) forward stroke, and (c) power forward; (2) backpaddling in a straight line by performing the following strokes: (a) reverse sweep, and (b) back paddle; (3) performing a low brace U-turn by performing the following strokes: (a) forward sweep, (b) low brace, and (c) power forward; and (4) performing a high brace U-turn by performing the following strokes: (a) forward sweep, (b) high brace, and (c) forward stroke.			
TP7	Have the cadets practice kayak strokes and manoeuvres while participating in on-water activities, to include: a. obstacle courses, b. mini games, or c. on-lake tripping.	Practical Activity	130 min	

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Demonstration and Performance:	190 min
c.	Interactive Lecture:	10 min
d.	Demonstration:	20 min
e.	Practical Activity:	130 min
f.	Total:	360 min

6. **Substantiation**:

   a. A demonstration and performance was chosen for TPs 1, 2, and 6 as it allows the instructor to explain and demonstrate launching and landing, actions on capsizing, and basic kayak strokes and manoeuvres while providing an opportunity for the cadets to practice under supervision.

   b. A demonstration was chosen for TPs 3 and 5 as it allows the instructor to explain and demonstrate how to roll a kayak and proper paddling posture while in a kayak in a controlled environment.

   c. An interactive lecture was chosen for TP 4 to generate interest and present basic or background material on the three golden rules on kayaking.

   d. A practical activity was chosen for TP 7 as it is an interactive way for the cadets to practice kayaking skills on flatwater.

7. **References**:

   a. C2-302 ISBN 978-1-896980-30-0 Whiting, K., Varette, K. (2008). *White water kayaking: The ultimate guide* (2nd Ed). Beachburg, ON: The Heliconia Press.

   b. C2-303 ISBN 978-1-55046-464-1 McGuffin, G. & McGuffin, J. (2008). *Paddle your own kayak: An illustrated guide to the art of kayaking*. Erin, ON: The Boston Mills Press.

8. **Training Aids**:

   a. Fully equipped kayak,

   b. Paddle,

   c. Helmet,

   d. PFD,

   e. Wetsuit or dry suit as required, and

   f. Activity equipment.

9. **Learning Aids**:

   a. Fully equipped kayak,

   b. Paddle,

   c. Helmet,

   d. PFD,

   e. Wetsuit or dry suit as required, and

   f. Activity equipment.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 7, S453B PC.

11. **Remarks**:

   a. Wetsuits or dry suits are recommended when water temperature is below 10 degrees Celsius.

   b. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, cadets must complete a *Declaration of Swimming Ability* prior to participating in kayak training or tripping on-water for more than 30 minutes or travelling greater than 1000 m.

c. The intensity level of the activity shall follow the progression matrix outlined in A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*.

d. If time permits and the skill level of the cadets meets the standard, have the cadets practice self rescue by attempting to perform a sweep roll.

e. Cadets will complete this EO in the training group established in EO S453B.01 (Prepare for Kayaking).

EO S453B.03

1. **Performance**: Paddle a Kayak on Moving Water

2. **Conditions**:

   a. Given:

      (1) Fully equipped kayak,

      (2) Paddle,

      (3) Helmet,

      (4) Personal floatation device (PFD),

      (5) Wetsuit or dry suit as required,

      (6) Activity equipment,

      (7) Personal equipment,

      (8) Supervision, and

      (9) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Class II moving water IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, during daylight hours.

3. **Standard**: The cadet shall:

   a. scout a set of rapids by:

      (1) identifying the class of the rapids;

      (2) identifying hazards;

      (3) selecting a route through the rapids;

      (4) identifying the safest shoreline; and

      (5) identifying downstream safety locations;

   b. carry out immediate action on capsizing as:

      (1) the paddler by completing a wet exit and swimming to the safest shoreline; and

      (2) downstream safety by:

         (a) talking;

         (b) reaching; and

         (c) throwing;

   c. execute an eddy turn; and

   d. execute an upstream ferry.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Identify the classes of the International Scale of River Difficulty (ISRD), to include: a. Class I (easy), b. Class II (novice), c. Class III (intermediate), d. Class IV (advanced), e. Class V (expert), and f. Class VI (extreme and exploratory).	Interactive Lecture	5 min	C2-302 (pp.97–98)
TP2	Discuss moving water, to include: a. defining the term rapid(s), and b. understanding the flow of water downstream, to include: (1) volume, and (2) current, to include: (a) middle of the river, (b) river left / river right, (c) river bends, (d) helical currents, and (e) current differential.	Interactive Lecture	15 min	C2-112 (pp. 119–125) C2-302 (pp.94–95) C2-303 (p. 92)
TP3	Identify and explain the following river features: a. confluence, b. channel, c. chute, d. downstream V, e. upstream V, f. eddy, g. eddy line, h. pool, i. boil, and j. drop. Note: This TP should be conducted while in view of the river—not all features will be visible at the same time. Find appropriate locations as required.	Interactive Lecture	15 min	C2-302 (pp.98–100, p. 103)

TP	Description	Method	Time	Refs
TP4	Identify and explain the following river hazards: a. rock(s), to include: (1) rock(s) in deep, quiet or slow-moving water, (2) rock(s) in slow current, (3) rock(s) in deep water with a fast current, and (4) rock(s) in deep water with a very fast current; b. rock gardens, c. undercut rocks, d. holes, to include: (1) frowning holes, (2) smiling holes, and (3) stoppers; e. potholes, f. ledge(s), g. low head dam or man-made weir, h. waterfall, and i. strainers / sweepers. Note: This TP should be conducted while in view of the river—not all features will be visible at the same time. Find appropriate locations as required.	Interactive Lecture	15 min	C2-112 (pp. 119–125) C2-302 (pp.104–108)
TP5	Identify and explain the following types of waves: a. curling waves, b. standing waves / haystacks, c. roller waves, d. re-circulating waves / hydraulics, to include: (1) non-keepers, and (2) keepers. Note: This TP should be conducted while in view of the river—not all features will be visible at the same time. Find appropriate locations as required.	Interactive Lecture	10 min	C2-112 (pp. 119–125) C2-302 (pp.101–102) C2-303 (p. 167)
TP6	Have the cadets, in groups of four, scout a set of rapids by: a. identifying the class of the rapids; b. identifying hazards;	Practical Activity	20 min	C2-302 (pp.120–123)

TP	Description	Method	Time	Refs
	c. selecting a route through the rapids; d. identifying the safest shoreline; and e. identifying downstream safety locations.			
TP7	Explain, demonstrate and have the cadets practice throwing a throw bag to rescue a swimmer by: a. taking position in full sight of the river; b. adopting the throwing position with the feet shoulder width apart and firmly planted on the ground; c. holding the throw bag in the throwing hand and the line in the opposite hand; d. watching for the swimmer to pass the rescue location; e. calling out ROPE; f. aiming the throw bag so that the rope will land just downstream of the swimmer; g. throwing the throw bag underhanded with a smooth, steady action; h. bracing for the weight of the swimmer on the rope; and i. swinging the swimmer to shore, pulling in the rope as required.	Demonstration and Performance	30 min	C2-112 (pp. 184–185) C2-212 (p. 74)
TP8	Explain, demonstrate and have the cadets complete a self-rescue and an assisted rescue in moving water by: a. adopting the defensive swimming position by: (1) rolling onto the back; (2) pointing the feet downstream; (3) positioning the left heel on top of the right toes with the right heel just below the buttocks; (4) tilting the head upward; (5) gripping the teeth together in a ‘river smile’; and (6) positioning the arms out toward the sides to provide stability and direction;	Demonstration and Performance	80 min	C2-112 (p. 180, pp. 184–185) C2-212 (p. 36)

TP	Description	Method	Time	Refs
	b. completing a self-rescue by: (1) performing a wet exit by: (a) tucking the body forward while upside down to protect the face and body; (b) pulling on the grab loop of the spray skirt; (c) moving the hands in-line with the hips; (d) pushing down and forward while leaning into the kayak to pull the legs free of the kayak; and (e) maintaining control of the paddle; (2) adopting the defensive swimming position; (3) backpaddling with the arms; (4) kicking the feet, as required; (5) angling the body toward the safest shore / eddy; (6) backpaddling to the safest shore / eddy; (7) retrieving the kayak; and (8) draining the kayak by: (a) unscrewing the drain plug at the back of the kayak while it is overturned; (b) lifting the bow so the water rushes to the stern; and (c) raising the bow as high as possible to allow all the water to drain; and c. completing an assisted rescue by: (1) performing a wet exit by: (a) tucking the body forward while upside down to protect the face and body; (b) pulling on the grab loop of the spray skirt; (c) moving the hands inline with the hips;			

TP	Description	Method	Time	Refs
	(d) pushing down and forward while leaning into the kayak to pull the legs free of the kayak; and (e) maintaining control of the paddle; (2) adopting the defensive swimming position; (3) swimming defensively toward the safest shore; (4) grabbing the rescue line that is thrown in front of the swimmer's body; (5) placing the rope over the shoulder closest to the safest shore; (6) kicking the feet to assist the rescuer, as required; (7) retrieving the kayak; and (8) draining the kayak by: (a) unscrewing the drain plug at the back of the kayak while it is overturned; (b) lifting the bow so the water rushes to the stern; and (c) raising the bow as high as possible to allow all the water to drain.			
TP9	Explain, demonstrate and have the cadets perform kayak manoeuvres in moving water, to include: a. executing an eddy turn by: (1) building speed until the kayak is travelling faster than the current; (2) angling the kayak to the eddy line at 30–45 degrees, just ahead of the obstacle; (3) executing a low brace U-turn in the direction of the eddy to initiate the turn; (4) edging the kayak in the direction of the turn;	Demonstration and Performance	160 min	C2-302 (pp.110–117) C2-303 (pp.92–95)

TP	Description	Method	Time	Refs
	(5) executing a reverse sweeping low brace while continuing to edge; and (6) executing power strokes after turning when in the eddy; and b. executing an upstream ferry by: (1) shifting the hips to angle the kayak in the direction of the current to edge downstream; (2) executing forward strokes to build speed; (3) continuing to edge downstream while paddling across the current; (4) executing power strokes to maintain forward momentum; (5) opening or closing the angle of the kayak as necessary; and (6) shifting the hips to recover once in the eddy.			
TP10	Have the cadets paddle a kayak on moving water, to include: a. scouting sets of rapids; b. choosing lines to run; c. employing paddle and whistle signals where appropriate; d. following the three golden rules of kayaking; and e. executing kayaking manoeuvres.	Practical Activity	720 min	

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Interactive Lecture:	60 min
c.	Demonstration and Performance:	270 min
d.	Practical Activity:	740 min
e.	Total:	1080 min

6. **Substantiation**:

a. An interactive lecture was chosen for TPs 1–5 to orient the cadets to the concept of moving water as well as features, obstacles and waves they may encounter when paddling.

b. A practical activity was chosen for TPs 6 and 10 as it is an interactive way for the cadets to practice kayaking skills on moving water.

c. A demonstration and performance was chosen for TPs 7–9 as it allows the instructor to explain and demonstrate self and assisted rescues, and moving water kayak manoeuvres while providing the cadets the opportunity to practice these skills under supervision.

7. **References**:

a. C2-112 ISBN 1-55048-377-2 McGuffin, G., & McGuffin J. (1999). *Paddle your own canoe: An illustrated guide to the art of canoeing*. Richmond Hill, ON: The Boston Mills Press.

b. C2-212 Segerstrom, J., Edwards, B., Hogan, M., Turnball, P., & Turnball J. M. (2001). *Rescue 3 international's whitewater rescue technician manual*. Elk Grove, CA: Rescue 3 International, Inc.

c. C2-302 ISBN 978-1-896980-30-0 Whiting, K., Varette, K. (2008). *White water kayaking: The ultimate guide* (2nd Ed). Beachburg, ON: The Heliconia Press.

d. C2-303 ISBN 978-1-55046-464-1 McGuffin, G. & McGuffin, J. (2008). *Paddle your own kayak: An illustrated guide to the art of kayaking*. Erin, ON: The Boston Mills Press.

8. **Training Aids**:

a. Fully equipped kayak,

b. Paddle,

c. Helmet,

d. Personal floatation device (PFD),

e. Wetsuit or dry suit as required,

f. Activity equipment,

g. Personal equipment, and

h. Topographical / river map of the area.

9. **Learning Aids**:

a. Fully equipped kayak,

b. Paddle,

c. Helmet,

d. Personal floatation device (PFD),

e. Wetsuit or dry suit as required,

f. Activity equipment,

g. Personal equipment, and

h. Topographical / river map of the area.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 7 S453B PC.

11. **Remarks**:

a. Wetsuits or dry suits are recommended when water temperature is below 10 degrees Celsius.

b. IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, cadets must complete a *Declaration of Swimming Ability* prior to participating in kayak training or tripping on-water for more than 30 minutes or travelling greater than 1000 m.

c. The intensity level of the activity shall follow the progression matrix outlined in A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. These policies limit cadets to Class II moving water. Where Class III water exists, rapids shall be scouted and the skill level of the cadets assessed. Class III water may be attempted with permission of a qualified moving water instructor.

d. Cadets will complete this EO in the training group established in EO S453B.01 (Prepare for Kayaking).

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PO S454

1. **Performance**: Climb a Natural Rock Face

2. **Conditions**:

   a. Given:

      (1) Helmet,

      (2) Sit harness,

      (3) Climbing shoes,

      (4) Chalk,

      (5) Belay device,

      (6) Locking aluminum carabiners,

      (7) Locking steel carabiners,

      (8) 7-mm kernmantle rope,

      (9) 12-inch sling,

      (10) Activity equipment,

      (11) Personal equipment,

      (12) Supervision, and

      (13) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Natural rock face, not to exceed Class 5.9 IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours, in dry weather.

3. **Standard**: The cadet will:

   a. deliver and respond to climbing commands;

   b. tie into the belay line by:

      (1) attaching the carabiner into the centre secure attachment point of the sit harness;

      (2) securing the climbing rope through the belay device;

      (3) securing the belay device and climbing rope through the carabiner;

      (4) locking the carabiner; and

      (5) checking that the sit harness is correctly positioned and the buckles of the straps are doubled back;

c. perform safety checks, to include:

(1) as the belayer, ensuring that the climber's:

(a) sit harness is correctly positioned with the buckles of the straps doubled back;

(b) rewoven figure of eight knot is through the front secure attachment point(s) on the climber's sit harness; and

(c) rewoven figure of eight is free of twists; and

(2) as the climber, ensuring that the belayer's:

(a) sit harness is correctly positioned with the buckles of the straps doubled back;

(b) belay device is secure; and

(c) carabiner is locked.

d. climb a natural rock face, to include:

(1) maintaining three points of contact;

(2) maintaining balance;

(3) identifying handhold / foothold locations;

(4) gripping handholds; and

(5) standing on footholds; and

e. perform belay techniques, to include:

(1) positioning both hands on the belay line;

(2) watching and guiding the climber;

(3) controlling the belay line;

(4) pulling up the slack in the rope, as required;

(5) breaking the climber, as required; and

(6) lowering the climber.

4. **Remarks**:

a. This PO is to be provided by technical specialists through a contracted service provider. The contract shall be initiated under the direction of RCSU (Prairie).

b. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide will be assigned to each training group.

c. IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, activity equipment for rock climbing shall consist of the following:

(1) communication device (eg, cellular phone or hand-held radio),

(2) first aid kit,

(3) at least one means of purifying water,

(4) topographical / trail map of area as required,

(5) compass,

(6) bear spray / anti-predator device if travelling in bear / predator country,

(7) 10.5-mm kernmantle dynamic rope,

(8) locking steel carabiners,

(9) locking aluminum carabiners,

(10) 12-inch slings, and

(11) quick-draws.

d. Personal equipment shall consist of the following:

(1) rain gear,

(2) insulating layer (top),

(3) water carrier,

(4) whistle,

(5) climbing shoes,

(6) climbing pants,

(7) climbing back pack,

(8) personal essentials, to include:

(a) sunscreen,

(b) bug repellent, and

(c) lip balm.

e. The intensity level of the activity shall follow the progression matrix outlined in A-CR-CCP-951/PT-002. This policy limits cadets to Class 5.9 rock climbing. Where Class 5.10 exists, the skill level of the cadets shall be assessed. Class 5.10 may be attempted with permission of a qualified rock climbing instructor.

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EO S454.01

1. **Performance**: Prepare to Rock Climb

2. **Conditions**:

   a. Given:

      (1) Helmet,

      (2) Sit harness,

      (3) Climbing shoes,

      (4) Chalk,

      (5) Belay device,

      (6) Locking aluminum carabiners,

      (7) 7-mm kernmantle rope,

      (8) 12-inch sling,

      (9) Activity equipment,

      (10) Personal equipment,

      (11) Supervision, and

      (12) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall prepare to rock climb by:

   a. sizing equipment; and

   b. donning equipment.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Identify and explain rock climbing equipment, to include: a. rock shoes, to include: (1) types, to include: (a) high performance shoe, (b) slippers, (c) all-purpose shoe, and (d) rock boot;	Interactive Lecture	15 min	C2-296 (p. 27) C2-304 (pp. 112–117) C2-306 (pp. 36–45)

TP	Description	Method	Time	Refs
	(2) parts, to include: (a) heel pull tab, (b) laces / velcro closure, (c) toe rand, (d) heel rand, (e) square edges, and (f) rubber covering; and (3) fit; b. sit harness, to include: (1) types, to include: (a) multi-purpose, (b) alpine, and (c) competition; and (2) parts, to include: (a) waist belt, (b) leg loops, (c) front secure attachment point(s), and (d) gear loops; c. helmet, d. kermantle rope, to include: (1) types, to include: (a) dry treated, and (b) non dry treated; (2) characteristics, to include: (a) dynamic, and (b) static; and (3) care / maintanence; and e. carabiner types, to include: (1) metal, and (2) aluminum; and f. belay device types, to include: (1) belay tubes, (2) belay plates, (3) figure eight devices, (4) autoblocking devices, and (5) autolocking devices.			

TP	Description	Method	Time	Refs
TP2	Explain, demonstrate and have the cadets don and adjust: a. rock shoes by: (1) selecting socks appropriate for the activity; (2) loosening the laces; (3) pushing the foot into the shoe until the toes reach the front; (4) tightening the laces, starting closest to the toes and moving up; and (5) walking around to check for appropriate fit ensuring: (a) tight around the foot, (b) minimal sliding, and (c) comfort; and b. sit harness by: (1) untangling the harness and holding it up in front of the body; (2) identifying the front and back of the harness and the left and right leg loops; (3) making sure that there are no twists in the harness and that the left and right leg loops are facing up; (4) stepping through the leg loops; (5) pulling the harness up the legs until the leg loops are at the top of the right and left thighs; (6) adjusting the waist belt just above the hips and tightening by pulling back on the strap; (7) tightening each leg loop by pulling out and down on the strap, so that it sits just above the thigh; and (8) securing all straps neatly out of the way.	Demonstration and Performance	15 min	C2-113 C2-295 (pp. 28–30)
TP3	Identify and explain the Yosemite Decimal System, to include: a. Class 5.0–5.4 (easy beginner routes), b. Class 5.5, 5.6 (intermediate beginner routes), c. Class 5.7 (challenging beginner routes),	Interactive Lecture	5 min	C2-293 (p. 286)

TP	Description	Method	Time	Refs
	d. Class 5.8, 5.9 (intermediate), e. Class 5.10, 5.11 (advanced), f. Class 5.12, 5.13 (expert), and g. Class 5.14, 5.15 (world class).			
TP4	Identify and explain the different types of rock formations which can be climbed, to include: a. rock faces, b. crags, c. slabs, d. cracks, and e. overhangs.	Interactive Lecture	5 min	C2-306 (pp. 104–107)
TP5	Identify and explain styles of rock climbing, to include: a. bouldering, b. sport, c. traditional, d. top rope, and e. solo.	Interactive Lecture	5 min	C2-196 (pp. 84–85) C2-293 (p. 142, 152, 173)
TP6	Identify and explain the criteria which should be considered when selecting a climbing location, to include: a. accessibility to medical care; b. ability to meet rock climbing style desired, to include: (1) sport, (2) traditional, or (3) top rope; c. availability of climbs to meet experience level of participants; d. availability of protection for climbers, to include: (1) natural, and (2) artificial; and e. potential hazards, to include: (1) wildlife, (2) weather, and (3) loose rock.	Interactive Lecture	10 min	C2-304 (pp. 71–72, p. 260)

TP	Description	Method	Time	Refs
TP7	Conduct a group discussion to discuss appropriate climbing etiquette, to include: a. avoiding the area between the belay line and the rock; b. keeping pathways clear at the base of a climb; c. yelling “rock” if anything is dropped from a climb; d. following the three try rule when attempting a difficult move; e. making sure the area is clear before throwing a rope down; f. removing a rope if not being used on a lane; and g. practicing the principles of Leave No Trace.	Group Discussion	15 min	C2-304 (p. 92)

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Interactive Lecture:	40 min
c.	Demonstration and Performance:	15 min
d.	Group Discussion:	15 min
e.	Total:	80 min

6. **Substantiation**:

a. An interactive lecture was chosen for TP 1 and TPs 3–6 to orient the cadets to the equipment pertaining to rock climbing, the Yosemite Decimal System, the types of rock faces, the styles of rock climbing, and the criteria for selecting a location.

b. A demonstration and performance was chosen for TP 2 as it allows the instructor to explain and demonstrate how to don and adjust equipment while providing an opportunity for the cadets to practice each skill under supervision.

c. A group discussion was chosen for TP 7 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings on appropriate climbing etiquette. Sharing in the discussion encourages the cadets to examine their own thoughts and may prompt them to re-think their previously held ideas. Participating in a group discussion improves the cadets’ listening skills and team development.

7. **References**:

a. C2-113 E How: How to do just about everything. (2007). *How to put on and wear a climbing harness*. Retrieved November 14, 2007, from http://www.ehow.com/how_1251_wear-climbingharness.html.

b. C2-295 ISBN 978-0-89886-828-9 Cox, M., & Fulsaas, K. (Eds.) (2003). *Mountaineering freedom of the hills* (7th ed). Seattle, WA: The Mountaineers Books.

c. C2-296 ISBN 978-0-7153-2844-1 Hill, P. (2008). *The complete guide to climbing and mountaineering*. Cincinnati, OH: David and Charles Ltd.

d. C2-304 ISBN 978-0-7360-6802-4 Kidd, T., & Hazelrigs, J. (2009). *Rock climbing*. Champaign, IL: Humane Kinetics.

e. C2-305 ISBN 978-0-89886-743-5 Luebben, C. (2004). *Rock climbing: Mastering basic skills*. Seattle, WA: The Mountaineers Books.

f. C2-306 ISBN 978-1-55407-278-1 Long, S. (2007). *The climbing handbook*. Buffalo, NY: Firefly Books.

8. **Training Aids**:

a. Helmet,

b. Sit harness,

c. Climbing shoes,

d. Belay device,

e. Locking aluminum carabiners, and

f. Personal equipment.

9. **Learning Aids**:

a. Helmet,

b. Sit harness,

c. Climbing shoes,

d. Belay device,

e. Locking aluminum carabiners,

f. Activity equipment, and

g. Personal equipment.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 8, S454 PC.

11. **Remarks**:

a. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide will be assigned to each training group.

b. If available, have clothing and equipment not issued to the cadets for demonstration and explanation purposes, such as:

(1) shoes,

(2) belay devices, and

(3) sit harnesses.

EO S454.02

1. **Performance**: Perform Rock Climbing Skills While Bouldering

2. **Conditions**:

   a. Given:

      (1) Helmet,

      (2) Climbing shoes,

      (3) Chalk,

      (4) Activity equipment,

      (5) Personal equipment,

      (6) Supervision, and

      (7) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Natural rock face, not to exceed Class 5.9 IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours, in dry weather.

3. **Standard**: The cadet shall perform rock climbing skills while bouldering, to include:

   a. body positioning and balance,

   b. handholds, to include:

      (1) pockets;

      (2) crimps;

      (3) jugs;

      (4) pinches;

      (5) jamming; and

      (6) palming;

   c. footholds, to include:

      (1) smearing;

      (2) edging;

      (3) jamming; and

      (4) hooking; and

   d. techniques for moving on a rock face.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Identify types of holds, to include: a. handholds, to include: (1) pockets; (2) crimps; (3) jugs; (4) pinches; (5) jams; and (6) palming; and b. footholds, to include: (1) smearing; (2) edging; (3) jamming; and (4) hooking.	Interactive Lecture	15 min	C2-304 (pp. 211–226) C2-305 (pp. 27–28, pp. 42–52)
TP2	Explain, demonstrate and have the cadets use the following holds while bouldering, to include: a. handholds, to include: (1) pockets; (2) crimps; (3) jugs; (4) pinches; (5) jams; and (6) palming; and b. footholds, to include: (1) smearing; (2) edging; (3) jamming; and (4) hooking.	Demonstration and performance	45 min	C2-304 (pp. 211–226) C2-305 (pp. 27–28, pp. 42–52)
TP3	Explain, demonstrate and have the cadets practice: a. adopting the approprite body position by: (1) keeping the weight centred over the feet; (2) using the skeleton for support rather than muscle; and (3) keeping control while in motion; b. focusing on technique and safety;	Demonstration and performance	20 min	C2-295 (pp. 211–212) C2-304 (p. 207)

TP	Description	Method	Time	Refs
	c. resting where appropriate; d. climbing with the eyes; e. using footwork; f. maintaining three points of contact; and g. checking for loose holds.			
TP4	Explain, demonstrate and have the cadets practice techniques for moving on a rock face, to include: a. laybacking; b. stemming; c. flagging; d. twist-locks; and e. gastons.	Demonstration and performance	30 min	C2-304 (pp. 211–226) C2-306 (pp. 98–99)

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Interactive Lecture:	15 min
c.	Demonstration and Performance:	95 min
d.	Total:	120 min

6. **Substantiation**:

a. An interactive lecture was chosen for TP 1 to orient the cadets to the types of holds that can be used while on the rock face.

b. A demonstration and performance was chosen for TPs 2–4 as it allows the instructor to explain and demonstrate how to utilize handholds and footholds, to climb effectively and to practice techniques for moving on the rock face while providing an opportunity for the cadets to practice each skill under supervision.

7. **References**:

a. C2-295 ISBN 978-0-89886-828-9 Cox, M., & Fulsaas, K. (Eds.). (2003). *Mountaineering freedom of the hills* (7th ed). Seattle, WA: The Mountaineers Books.

b. C2-296 ISBN 978-0-7153-2844-1 Hill, P. (2008). *The complete guide to climbing and mountaineering*. Cincinnati, OH: David and Charles Ltd.

c. C2-304 ISBN 978-0-7360-6802-4 Kidd, T., & Hazelrigs, J. (2009). *Rock climbing*. Champaign, IL: Humane Kinetics.

d. C2-305 ISBN 978-0-89886-743-5 Luebben, C. (2004). *Rock climbing: Mastering basic skills*. Seattle, WA: The Mountaineers Books.

e. C2-306 ISBN 978-1-55407-278-1 Long, S. (2007). *The climbing handbook*. Buffalo, NY: Firefly Books.

8. **Training Aids**:

   a. Helmet,

   b. Climbing shoes,

   c. Chalk,

   d. Spotter or crash mat,

   e. Activity equipment, and

   f. Personal equipment.

9. **Learning Aids**:

   a. Helmet,

   b. Climbing shoes,

   c. Chalk,

   d. Spotter or crash mat, and

   e. Personal equipment.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 8, S454 PC.

11. **Remarks:**

   a. Cadets will complete this EO in the training group established in EO S454.01 (Prepare to Rock Climb).

   b. IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, spotters or crash mats are required for bouldering.

EO S454.03

1. **Performance**: Climb a Natural Rock Face

2. **Conditions**:

   a. Given:

      (1) Helmet,

      (2) Sit harness,

      (3) Climbing shoes,

      (4) Chalk,

      (5) Belay device,

      (6) Locking aluminum carabiners,

      (7) 7-mm kernmantle rope,

      (8) 12-inch sling,

      (9) Activity equipment,

      (10) Personal equipment,

      (11) Supervision, and

      (12) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Natural rock face, not to exceed Class 5.9 IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours, in dry weather.

3. **Standard**: The cadet shall:

   a. deliver and respond to climbing commands;

   b. tie knots, to include:

      (1) overhand knot,

      (2) figure of eight,

      (3) rewoven figure of eight, and

      (4) prusik;

   c. tie a clove hitch;

   d. tie into a belay line;

   e. tie into the belay system;

   f. perform safety checks as:

      (1) the belayer, and

      (2) the climber;

g. ascend a natural rock face;

h. perform belay techniques; and

i. rappel down a natural rock face while using a bottom belay.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Explain, demonstrate and have the cadets deliver and respond to climbing commands: a. before the climb, to include: (1) TAKE—used by the climber to indicate a need for the rope to be tight; (2) GOT—used by the belayer to indicate that the rope is now tight; (3) ON BELAY—asked by the climber to comfirm that the belayer is ready to start belaying; (4) BELAY ON—used by the belayer to indicate that they are ready; (5) CLIMBING—used by the climber to indicate that they are about to start; and (6) CLIMB ON—used by the belayer to give the climber permission to proceed; b. during the climb, to include: (1) SLACK—used by the climber to indicate a need for more rope; (2) TAKE—used by the climber to indicate a need for the rope to be tight; (3) FALLING—used by the climber to indicate that the belayer should be ready for a fall; (4) LOWER—used by the climber to indicate a desire to come down; (5) LOWERING—used by the belayer to indicate a controlled desent for the climber; (6) ROCK—yelled at anytime to indicate that something is falling;	Demonstration and Performance	10 min	C2-304 (p. 174)

TP	Description	Method	Time	Refs
	(7) CLIPPING—used by the climber to signal the belayer to let out a little rope to allow the climber to clip more easily; and (8) CLIPPED—used by the climber to indicate that the clip has been made and to take in extra rope; and c. after the climb, to include: (1) OFF BELAY—used by the climber to indicate that the climb has been completed; and (2) BELAY OFF—used by the belayer to confirm that the climber is no longer on belay.			
TP2	Have the cadets tie the following knots and hitches: a. with 10.5-mm kernmantle rope: (1) figure of eight, (2) rewoven figure of eight, and (3) clove hitch; and b. with 7-mm kernmantle rope: (1) overhand knot, and (2) prusik knot.	Performance	10 min	C2-305 (pp. 82–86, p. 93)
TP3	Explain, demonstrate and have the cadets in a group of three, tie into the belay line: a. as the belayer by: (1) attaching the carabiner into the centre secure attachment point of the sit harness; (2) securing the climbing rope through the belay device; (3) securing the belay device and climbing rope through the carabiner; (4) locking the carabiner; and (5) checking that the sit harness is correctly positioned and the buckles of the straps are doubled back; and b. as the climber by: (1) holding the working end of the rope in the right hand; (2) grasping the standing end in the left hand;	Demonstration and Performance	20 min	C2-304 (pp. 129–133, p. 165) C2-305 (p. 127)

TP	Description	Method	Time	Refs
	(3) holding the left hand in-line with the front secure attachment point; (4) pulling approximately an arm's length of rope with the right hand; (5) tying a figure of eight at the point in the rope where the left hand is holding; (6) running the working end of the rope through the front secure attachment points; (7) weaving through the figure of eight tying a rewoven figure of eight ensuring that there are no twists in the knot; (8) ensuring that a clenched fist can not fit in the loop between the knot and the harness and that there are approximately 15 cm (6 inches) of standing end from the knot; and (9) checking that the sit harness is correctly positioned and the buckles of the straps are doubled back. Note: The third cadet will act as the back up, holding on to the belay line behind the belayer.			
TP5	Explain, demonstrate and have the cadets perform safety checks: a. as the belayer, ensuring that the climber's: (1) sit harness is correctly positioned with the buckles of the straps doubled back; (2) rewoven figure of eight knot is through the front secure attachment point(s) on the climber's sit harness; and (3) rewoven figure of eight is free of twists; and b. as the climber, ensuring that the belayer's: (1) sit harness is correctly positioned with the buckles of the straps doubled back; (2) belay device is secure; and (3) carabiner is locked.	Demonstration and Performance	10 min	C2-306 (p. 39)

TP	Description	Method	Time	Refs
TP6	Explain demonstrate and have the cadets ascend a natural rock face by: a. delivering and responding to climbing commands; b. maintaining three points of contact; c. maintaining balance; d. identifying handhold / foothold locations; e. gripping handholds; f. standing on footholds; and g. being lowered under the control of the belayer to the bottom. Note: The performance for this TP will happen concurrently with the TP 7.	Demonstration and Performance	30 min	
TP7	Explain, demonstrate and have the cadets perform belay techniques, to include: a. delivering and responding to climbing commands; b. positioning both hands on the belay line; c. watching and guiding the climber; d. controlling the belay line; e. pulling up the slack in the rope, as required; f. breaking the climber, as required; and g. lowering the climber. Note: The performance for this TP will happen concurrently with the TP 6.	Demonstration and Performance		C2-305 (pp. 129–131)
TP8	Explain, demonstrate and have the cadets rappel down a natural rock face with a bottom belay by: a. attaching a carabiner to the front secure attachment point in the centre of the harness; b. securing the climbing rope(s) through the belay device; c. securing the rope(s) and belay device to the carabiner; d. locking the carabiner; and e. repelling under control to the bottom.	Demonstration and Performance	20 min	C2-305 (p. 221)

TP	Description	Method	Time	Refs
TP9	Conduct a rock climbing activity where the cadets will climb a natural rock face, to practice: a. executing efficient movement techniques; b. delivering and responding to climbing commands; and c. performing effective belay techniques.	Practical Activity	530 min	

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Demonstration and Performance:	100 min
c.	Practical Activity:	530 min
d.	Total:	640 min

6. **Substantiation**:

a. A demonstration and performance was chosen for TPs 1–8 as it allows the instructor to explain and demonstrate how to safely and effectively climb a rock face under the control of a bottom belay providing an opportunity for the cadets to practice each skill under supervision.

b. A practical activity was chosen for TP 9 as it is an interactive way for the cadets to practice climbing a natural rock face in a safe and controlled environment. This activity contributes to the development of climbing techniques in a fun and challenging setting.

7. **References**:

a. C2-295 ISBN 978-0-89886-828-9 Cox, M., & Fulsaas, K. (Eds.). (2003). *Mountaineering freedom of the hills* (7th ed). Seattle, WA: The Mountaineers Books.

b. C2-304 ISBN 978-0-7360-6802-4 Kidd, T., & Hazelrigs, J. (2009). *Rock climbing*. Champaign, IL: Humane Kinetics.

c. C2-305 ISBN 978-0-89886-743-5 Luebben, C. (2004). *Rock climbing: Mastering basic skills*. Seattle, WA: The Mountaineers Books.

d. C2-306 ISBN 978-1-55407-278-1 Long, S. (2007). *The climbing handbook*. Buffalo, NY: Firefly Books.

8. **Training Aids**:

a. Helmet,

b. Sit harness,

c. Climbing shoes,

d. Chalk,

e. Belay device,

f. Locking aluminum carabiners,

g. 7-mm kernmantle rope,

h. Activity equipment, and

i. Personal equipment.

9. **Learning Aids**:

a. Helmet,

b. Sit harness,

c. Climbing shoes,

d. Chalk,

e. Belay device,

f. Locking aluminum carabiners,

g. 7-mm kernmantle rope,

h. Activity equipment, and

i. Personal equipment.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 8, S454 PC.

11. **Remarks**: Cadets will complete this EO in the training group established in EO S454.01 (Prepare to Rock Climb).

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EO S454.04

1. **Performance**: Perform a Multi-Pitch Climb

2. **Conditions**:

   a. Given:

      (1) Helmet,

      (2) Sit harness,

      (3) Climbing shoes,

      (4) Chalk,

      (5) Belay device,

      (6) Locking aluminum carabiners,

      (7) 7-mm kernmantle rope,

      (8) 12-inch sling,

      (9) Activity equipment,

      (10) Personal equipment,

      (11) Supervision, and

      (12) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Natural rock face, not to exceed Class 5.9 IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours, in dry weather.

3. **Standard**: The cadet shall:

   a. perform multi-pitch ground training;

   b. perform a multi-pitch climb, to include:

      (1) climbing as the second; or

      (2) climbing as the third.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Explain, demonstrate and have the cadet, in two groups, perform multi-pitch ground training, to include: a. belaying the lead climber, to include: (1) keeping an attentive watch on the climber; (2) pulling slack with the guide hand as the climber moves up or clips in protection; (3) taking up slack as required; and (4) maintaining constant control with the brake hand; b. organizing the belay station, to include rope management; c. securing to the anchor by: (1) reaching the top of the pitch; (2) attaching a locking carabiner to the anchor point; (3) tying a clove hitch onto the carabiner with the climbing rope; (4) locking the carabiner; and (5) ensuring that when the rope is weighted, the anchor point is still able to be reached; and d. removing climbing protection gear by: (1) locating climbing protection; (2) removing protection from rock face; (3) clipping protection onto gear loops of harness or securing over the shoulder; and (4) unclipping protection from the climbing rope.	Demonstration and Performance	40 min	C2-304 (p. 168, p. 251, pp. 109–111)
TP2	Have the cadets, in groups of no more than two, perform a multi-pitch climb, to include: a. climbing as the second, to include: (1) belaying the lead climber; (2) unclipping protection from climbing rope and back clipping onto the trailing rope; (3) securing to the anchor;	Practical Activity	630 min	C2-304 (pp. 232–239, pp. 270–273)

TP	Description	Method	Time	Refs
	(4) belaying the third climber; and (5) rappelling down the rock face; or b. climbing as the third, to include: (1) removing climbing protection gear; (2) securing to the anchor point; (3) dismantling of each anchor point by: (a) removing hardware from the rock face; (b) clipping the hardware onto the gear loops of harness or securing over the shoulder; and (c) unclipping hardware from the climbing rope; and (4) rappelling down the rock face.			

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Demonstration and Performance:	40 min
c.	Practical Activity:	630 min
d.	Total:	680 min

6. **Substantiation**:

a. A demonstration and performance was chosen for TP 1 as it allows the instructor to explain and demonstrate how to perform a multi-pitch ground training while providing an opportunity for the cadets to practice each skill under supervision.

b. A practical activity was chosen for TP 2 as it is an interactive way for the cadets to perform a multi-pitch climb in a safe and controlled environment. This activity contributes to the development of climbing techniques in a fun and challenging setting.

7. **References**: C2-304 ISBN 978-0-7360-6802-4 Kidd, T., & Hazelrigs, J. (2009). *Rock climbing*. Champaign, IL: Humane Kinetics.

8. **Training Aids**:

a. Helmet,

b. Sit harness,

c. Climbing shoes,

d. Chalk,

e. Belay device,

f. Locking aluminum carabiners,

g. 7-mm kernmantle rope,

h. 12-inch sling,

i. Activity equipment, and

j. Personal equipment.

9. **Learning Aids**:

a. Helmet,

b. Sit harness,

c. Climbing shoes,

d. Chalk,

e. Friction-producing device,

f. Belay device,

g. 7-mm kernmantle rope,

h. 12-inch sling,

i. Activity equipment, and

j. Personal equipment.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 8 S454 PC.

11. **Remarks**:

a. Cadets will complete this EO in the training group established in EO S454.01 (Prepare to Rock Climb).

b. Each cadet must complete the multi-pitch ground training to pass this PO. If weather permits, a multi-pitch climb may be attempted.

c. It is not necessary for the cadets to be tested in both the second and third multi-pitch climbing positions.

PO S455

1. **Performance**: Mountaineer on a Glacier

2. **Conditions**:

   a. Given:

      (1) Hiking boots,

      (2) Trekking pole,

      (3) Carabiners,

      (4) Sit harness,

      (5) 7-mm kernmantle rope,

      (6) Crampons,

      (7) Ice tool,

      (8) Helmet,

      (9) Eye protection (sunglasses or goggles),

      (10) Activity equipment,

      (11) Personal equipment,

      (12) Group equipment,

      (13) Supervision, and

      (14) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Alpine and glacier conditions IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours, during favourable weather.

3. **Standard**: The cadet will demonstrate mountaineering skills on a glacier, to include:

   a. perform mountaineering skills, to include:

      (1) donning a sit harness;

      (2) tying into a rope team, to include:

         (a) attaching two carabiners to the secure attachment point of the sit harness;

         (b) adopting a position 8–10 m behind the rope team member to the front;

         (c) tying a figure of eight on a bight to the 10.5-mm kernmantle rope running between all team members;

         (d) securing the figure of eight on a bight to the sit harness using both of the carabiners attached to the secure attachment point;

         (e) attaching a length of 7-mm kernmantle rope to the running end(s) (front and rear as required) of the 10.5-mm kernmantle rope using a prusik knot; and

(f) securing the prusik knot(s) to the sit harness, through the secure attachment point, by tying an overhand knot(s); and

(3) completing a final equipment check by ensuring:

(a) all buckles on the harness are secure;

(b) both carabiners are locked and opposed; and

(c) there is no tension on the prusik sling(s) attached to the 10.5-mm kernmantle rope;

b. demonstrate glacier travel techniques, to include:

(1) ascending an incline, to include:

(a) climbing in balance by:

i. placing the ice tool above and ahead into the snow in the self-belay position;

ii. moving up one step and repositioning the ice tool on the uphill side; and

iii. avoiding prolonged periods of out-of-balance positions;

(b) employing the step-kick by:

i. swinging the leg and allowing its weight to provide an impact to create the step;

ii. ensuring the steps are spaced evenly and close together; and

iii. ensuring the steps are level or tilted slightly into the slope;

(c) switchbacking to change direction by:

i. starting from a position of balance and jabbing the ice tool into the snow at chest height;

ii. moving the outside foot forward approximately one step and grasping the ice tool with both hands;

iii. turning the inside foot and body toward the new direction of travel; and

iv. returning to a position of balance; and

(2) descending a decline, to include:

(a) plunge-stepping by:

i. holding the ice tool in the self-arrest position;

ii. placing the heal firmly into the snow with the leg vertical;

iii. transferring the weight to the new position;

iv. keeping the knees slightly bent to maintain balance;

v. continuing Steps ii–iv while alternating legs; and

vi. maintaining a steady rhythm; and

(b) down-climbing by:

i. facing into the slope;

ii. climbing down backward; and

iii. kicking steps into the slope; and

c. complete a self-arrest with an ice tool, to include:

(1) falling head uphill, on the stomach by:

(a) bringing the head of the ice tool up to the shoulder;

(b) crossing the shaft over the body;

(c) holding the pick with the opposite hand;

(d) rotating the top hand placing downward pressure on the head of the tool;

(e) kicking the feet into the snow;

(f) jabbing the pick of the tool into the snow; and

(g) rolling the body weight over the adze of the ice tool; and

(2) falling head uphill, on the back by:

(a) bringing the head of the ice tool up to the shoulder;

(b) crossing the shaft over the body;

(c) holding the pick with the opposite hand;

(d) rotating the top hand placing downward pressure on the head of the tool;

(e) rolling toward the head of the ice tool;

(f) jabbing the pick of the tool into the snow;

(g) rolling the body weight over the adze of the ice tool; and

(h) kicking the feet into the snow; and

d. execute a team arrest by:

(a) quickly sitting on the ground;

(b) driving the heel of the boot into the snow;

(c) jabbing the pick of the ice tool into the snow;

(d) placing body weight over the tool; and

(e) rolling over into the self arrest position if required.

4. **Remarks**:

a. This PO is to be provided by technical specialists through a contracted service provider. The contract shall be initiated under the direction of RCSU (Prairie).

b. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide for every three cadets will be assigned to each training group.

c. Some of the lessons taught during this PO mimic those that are being taught during the alpine trekking cycle. If a cadet has already successfully completed that cycle, less time may be spent on similar material and more on mountaineering specific material.

d. IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, the following activity equipment is required for glacier training:

(1) communication device (eg, cellular phone or hand-held radio),

(2) first aid kit,

(3) at least one means of purifying water,

(4) topographical / trail map of area as required,

(5) compass,

(6) bear spray / anti-predator device if travelling in bear / predator country, and

(7) 10.5-mm dry-treated kernmantle dynamic rope.

e. Personal equipment shall consist of:

(1) expedition field pack,

(2) meals

(3) sleeping bag,

(4) waterproof compression sack,

(5) air mattress,

(6) cold weather clothing, to include:

(a) socks,

(b) thermal layer (top and bottom),

(c) insulating layer (top and bottom),

(d) waterproof layer (top and bottom),

(e) toque,

(f) gloves,

(g) glove liners, and

(h) gaiters,

(7) rain gear,

(8) valise / stuff sack,

(9) whistle,

(10) food,

(11) water carrier,

(12) resealable plastic bags (small and large),

(13) garbage bags,

(14) knife,

(15) headlamp / flashlight,

(16) batteries,

(17) matches,

(18) individual first aid kit, and

(19) personal essentials, to include:

(a) sunscreen,

(b) bug repellent,

(c) lip balm,

(d) biodegradable soap,

(e) toothbrush,

(f) toothpaste, and

(g) toilet paper.

f. Group equipment shall consist of the following:

(1) tent,

(2) stove,

(3) fuel bottle,

(4) fuel,

(5) pot set,

(6) folding saw,

(7) rope,

(8) Glow Sticks, and

(9) expedition repair kit, to include:

(a) duct tape,

(b) lip balm / petroleum jelly,

(c) lubricating oil,

(d) an assortment of fabric swatches,

(e) an assortment of plastic buckles,

(f) an assortment of needles,

(g) thread (heavy duty),

(h) dental floss,

(i) aluminum pole-repair sleeve,

(j) adhesive / seam sealer (Seam Grip),

(k) alcohol swabs,

(l) air mattress patches,

(m) 2–3 m (5–10 feet) of nylon parachute cord,

(n) heavy duty rubber bands,

(o) zap straps,

(p) 1–2 m (3–6 feet) of tubular webbing, and

(q) a lightweight multi-tool.

EO S455.01

1. **Performance**: Prepare for Glacier Travel
2. **Conditions**:
   a. Given:
      (1) Hiking boots,
      (2) Trekking pole,
      (3) Carabiners,
      (4) Sit harness,
      (5) 7-mm kernmantle rope,
      (6) Crampons,
      (7) Ice tool,
      (8) Helmet,
      (9) Eye protection (sunglasses or goggles),
      (10) Activity equipment,
      (11) Personal equipment,
      (12) Group equipment,
      (13) Supervision, and
      (14) Assistance as required.
   b. Denied: Nil.
   c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard**: The cadet shall prepare for glacier travel by:
   a. sizing, donning and adjusting equipment, to include:
      (1) sit harness,
      (2) crampons, and
      (3) helmet;
   b. erecting and striking a tent;
   c. fuelling and lighting a stove;
   d. packing an expedition field pack; and
   e. adjusting an expedition field pack.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Discuss: a. glacial types, to include: (1) dry glaciers, and (2) wet glaciers; b. glacial zones, to include: (1) accumulation zone, (2) ablation zone, (3) compression zone, and (4) tension zone; c. how they are formed through the aging of snow; d. where are they located, to include: (1) European Alps, (2) Alaska Range, (3) Canadian Rockies, (4) Antarctica, and (5) Himalayas; and e. how glacier surface conditions change, due to: (1) climate, to include: (a) maritime (temperate), (b) subarctic, (c) continental, (d) polar regions, (e) subtropical, and (f) tropical; and (2) global warming.	Interactive Lecture	15 min	C2-293 (p. 261) C2-294 (p. 17, pp. 23–28) C2-295 (pp. 531–533)
TP2	Explain the procedure for disposal of: a. garbage, and b. human waste. Note: Procedures for the disposal of waste may differ according to the area the activity takes place. Instructors should familiarize themselves with the regulations.	Interactive Lecture	5 min	C2-295 (pp. 125–127)

TP	Description	Method	Time	Refs
TP3	Conduct an activity where the cadets, as a group, will divide a selection of equipment into the following: a. personal equipment, b. group equipment, and c. activity equipment.	In-Class Activity	10 min	C2-042 (p. 73) C2-051 (pp. 40–44, pp. 102–107)
TP4	Identify and explain glacier equipment, to include: a. hiking boots, to include: (1) approach shoes, (2) hard leather boots, (3) half shanked boots, (4) fully shanked boots, and (5) double plastic boots; b. crampons, to include: (1) types, to include: (a) hard ice crampons, and (b) snow ascent crampons; and (2) parts, to include: (a) points, (b) plates, and (c) strapping system; c. trekking pole(s), to include: (1) types, to include: (a) standard, (b) antishock, (c) compact, and (d) ultralight; (2) parts, to include: (a) grip, (b) extended grip, (c) shaft, (d) telescopic adjustment, (e) baskets, and (f) tip; and (3) how to adjust for fit;	Interactive Lecture	20 min	C2-293 (pp. 80–102) C2-294 (p. 19–42) C2-295 (pp. 43–44)

TP	Description	Method	Time	Refs
	d. ice tool(s), to include: (1) types, to include: (a) moderate terrain tool, (b) steaper ice, and (c) water ice tool; (2) parts, to include: (a) adze, (b) pick, (c) shaft, (d) spike, and (e) wrist loop; and (3) how to hold in the self belay position while walking by: (a) holding in the uphill hand; (b) ensuring the adze faces forward; (c) placing the palm of the hand on the top of the tool; and (d) wrapping the fingers around the pick and the adze; e. sit harness, to include: (1) types, to include: (a) multi-purpose, (b) alpine, and (c) competition; and (2) parts, to include; (a) waist belt, (b) gear loops, (c) secure attachment point(s), and (d) leg loops; f. carabiner types, to include: (1) metal, and (2) aluminum; g. eye protection (sunglasses or goggles); h. helmet, and			

TP	Description	Method	Time	Refs
	i. kermantle rope, to include: (1) types, to include: (a) dry treated, and (b) non dry treated; and (2) characteristics, to include: (a) dynamic, and (b) static.			
TP5	Explain, demonstrate and have the cadets in two groups: a. don and adjust: (1) hiking boots by: (a) selecting socks appropriate for the activity; (b) loosening the bootlaces; (c) pushing the foot into the boot until the toes reach the front; (d) tightening the laces starting closest to the toes and moving up the boot; (e) walking around to check for discomfort; and (f) donning a loaded expedition field pack and walking around to check for discomfort; (2) gaiters by: (a) hooking the gaiter strap onto the first row of laces on the hiking boot; (b) wrapping the gaiter around the foot and lower leg; (c) zipping up the gaiter on the appropriate side; (d) securing the lower strap underneath the boot, just in front of the heel; (e) buckling the lower strap; and (f) adjusting the gaiter at the top to ensure it fits tight around the leg;	Demonstration and Performance	30 min	C2-113 C2-293 (pp. 88–89) C2-295 (pp. 28–30)

TP	Description	Method	Time	Refs
	(3) crampons by: (a) losening the adjustment screws; (b) sizing the crampon to the appropriate length and width of the boot; (c) tightening the adjustment screws; and (d) weaving the lace through the eyelets and around the boot; (4) trekking pole(s) by: (a) unscrewing the telescoping adjustment; (b) sizing to arm height; and (c) locking the telescopic adjustment; and (5) sit harness by: (a) untangling the harness and holding it in front of the body; (b) identifying the front and back of the harness and the left and right leg loops; (c) making sure that there are no twists in the harness and that the left and right leg loops are facing up; (d) stepping through the leg loops; (e) pulling the harness up the legs until the leg loops are at the top of the thigh; (f) adjusting the waist belt so it sits just above the hips and tightening the waist belt by pulling back on the strap; (g) tightening each leg loop by pulling out and down on the strap so that it sits just above the thigh; and (h) securing all straps neatly out of the way.			

TP	Description	Method	Time	Refs
	Note: This TP is conducted using two stations. One will consist of hiking boots, gaiters and crampons; the other will consist of trekking poles and sit harnesses. Cadets will have 15 minutes to complete each station and then they will switch.			
TP6	Explain, demonstrate and have the cadets in two groups: a. fuel and light a stove; and b. erect and strike a tent. Note: This TP is conducted in two groups—with each group completing the skills concurrently. When one skill is complete the group will move onto the next skill. The procedure for each skill will depend on the equipment being used.	Demonstration and Performance	15 min	
TP7	Explain and demonstrate the principles of packing an expedition field pack, to include: a. waterproofing, b. accessibility, c. space management, d. weight distribution, e. balance, and f. compactness.	Demonstration	15 min	C2-293 (pp. 81–83) C2-295 (pp. 33–34)
TP8	Have the cadets pack an expedition field pack by: a. receiving meals, b. stripping meals, if required by: (1) removing unnecessary items; (2) removing garbage / excess packaging; (3) separating items into snacks and meals; and (4) organizing items into individual plastic bags; c. organizing personal equipment; d. dividing group equipment, to include: (1) tent, (2) fuel, (3) stove, (4) rope, if required,	Practical Activity	30 min	

TP	Description	Method	Time	Refs
	(5) pot set, and (6) expedition repair kit, and e. packing equipment to maximize space and ensure comfort.			
TP9	Explain, demonstrate and have the cadets adjust a pack for comfort, to include: a. loosening all straps and placing the pack on the shoulders; b. adjusting the hip belt; c. adjusting the shoulder straps; d. tightening the top tension load lifters; and e. clipping the sternum strap on the chest.	Demonstration and Performance	10 min	C2-042 (p. 72, p. 130) C2-051 (p. 97)

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Interactive Lecture:	40 min
c.	In-Class Activity:	10 min
d.	Demonstration and Performance:	55 min
e.	Demonstration:	15 min
f.	Practical Activity:	30 min
g.	Total:	160 min

6. **Substantiation**:

a. An interactive lecture was chosen for TPs 1, 2 and 4 to orient the cadets to the equipment pertaining to glacier travel, and to illustrate the principles of packing equipment for an expedition.

b. An in-class activity was chosen for TP 3 as it is an interactive way to provoke thought and stimulate interest among cadets in the topic of personal, group and activity equipment pertaining to glacier travel.

c. A demonstration and performance was chosen for TPs 5, 6, and 9 as it allows the instructor to explain and demonstrate how to don and adjust equipment, erect a tent, light a stove, and adjust a pack for comfort while providing an opportunity for the cadets to practice each skill under supervision.

d. A demonstration was chosen for TP 7 as it allows the instructor to explain and demonstrate the principles of packing an expedition field pack.

e. A practical activity was chosen for TP 8 as it is an interactive way to allow the cadets to pack equipment for glacier travel.

7. **References**:

a. C2-042 ISBN 0-7566-0946-1 Berger, K. (2005). *Backpacking & hiking*. New York, NY: DK Limited.

b. C2-051 ISBN 978-0-7153-2254-3 Bagshaw, C. (2006). *The ultimate hiking skills manual*. Cincinatti, Ohio: David & Charles.

c. C2-113 E How: How to do just about everything. (2007). *How to put on and wear a climbing harness*. Retrieved November 14, 2007, from http://www.ehow.com/how_1251_wear-climbingharness.html.

d. C2-293 ISBN 978-0-89886-749-7 Houston, M., & Cosley, K. (2004). *Alpine climbing: Techniques to take you higher*. Seattle, WA: The Mountaineers Books.

e. C2-294 ISBN 978-0-89886-658-2 Selters, A. (1999). *Glacier travel & crevasse rescue*. Seattle, WA: The Mountaineers Books.

f. C2-295 ISBN 978-0-89886-828-9 Cox, M., & Fulsaas, K. (Eds.). (2003). *Mountaineering freedom of the hills* (7th ed). Seattle, WA: The Mountaineers Books.

8. **Training Aids**:

a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area,

b. Hiking boots,

c. Trekking pole,

d. Locking carabiners,

e. Sit harness,

f. 7-mm kernmantle rope,

g. Crampons,

h. Ice tool,

i. Helmet,

j. Eye protection (sunglasses or goggles),

k. Meals,

l. Packed expedition field pack,

m. Activity equipment,

n. Personal equipment, and

o. Glacier maps.

9. **Learning Aids**:

a. Hiking boots,

b. Trekking pole,

c. Carabiners,

d. Sit harness,

e. 7-mm kernmantle rope,

f. Crampons,

g. Ice tool,

h. Helmet,

i. Eye protection (sunglasses or goggles),

j. Meals,

k. Activity equipment, and

l. Personal equipment.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 9 S455 PC.

11. **Remarks**:

a. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide for every three cadets will be assigned to each training group.

b. Some of the material taught during this lesson mimics what is being taught during the alpine trekking cycle. If the cadets have already successfully completed that cycle, timings may be adjusted to focus on mountaineering specific material.

c. If available, have clothing and equipment not issued to the cadets for demonstration and explanation purposes, such as:

(1) shoes / boots,

(2) crampons,

(3) ice tool, and

(4) clothing.

d. The cadets must bring all personal items to this lesson.

EO S455.02

1. **Performance**: Perform Mountaineering Skills

2. **Conditions**:

   a. Given:

      (1) Hiking boots,

      (2) Trekking pole,

      (3) Carabiners,

      (4) Sit harness,

      (5) 7-mm kernmantle rope,

      (6) Crampons,

      (7) Ice tool,

      (8) Helmet,

      (9) Eye protection (sunglasses or goggles),

      (10) Activity equipment,

      (11) Supervision, and

      (12) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall:

   a. tie knots, to include:

      (1) overhand knot,

      (2) figure of eight on a bight, and

      (3) prusik knot;

   b. tie a clove hitch;

   c. tie into a roped team;

   d. execute self rescue techniques, to include:

      (1) self belay;

      (2) self arrest without an ice tool; and

(3) self arrest with an ice tool, to include:

(a) falling head uphill, on the stomach; and

(b) falling head uphill, on the back; and

e. execute a team arrest.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Discuss hazards on the glacier, to include: a. judgment of the guide, to include: (1) experience, (2) knowledge, and (3) allowing guides to make decisions; b. alpine hazards, to include: (1) rockfall, (2) icefall, (3) avalanches, and (4) snow instability; c. weather hazards, to include: (1) storms, (2) fronts, (3) winds, and (4) indicators, to include: (a) changes in cloud cover, (b) changes in air pressure, (c) changes in wind speed, and (d) changes in wind direction; and d. human hazards, to include: (1) inadequate physical conditioning, (2) knowledge, (3) training, (4) discomfort with subject matter, (5) other climbers, and (6) mountain first aid concerns, to include: (a) snow blindness, (b) acute mountain sickness,	Interactive Lecture	20 min	C2-293 (pp. 32–41) C2-295 (p. 544, pp. 488–490)

TP	Description	Method	Time	Refs
	(c) high altitude pulmonary edema, and (d) high altitude cerebral edema.			
TP2	Explain, demonstrate and have the cadets practice tying the following knots and hitches: a. with 10.5-mm kernmantle rope: (1) figure of eight on a bight, and (2) clove hitch, b. with 7-mm kernmantle rope: (1) overhand knot, and (2) prussik knot.	Demonstration and Performance	15 min	C2-296 (pp. 36–41)
TP3	Explain, demonstrate and have the cadets practice the procedure for: a. a self belay by: (1) placing the down slope hand on the shaft of the ice tool at the snow surface; (2) pushing the hand holding the head of the ice tool forward; (3) kicking a hole in the snow with the feet; and (4) pushing with the hands and feet to return to a standing position; b. a self arrest without an ice tool by: (1) rolling onto the stomach; (2) placing the inside edges of the boots into the snow; (3) pushing the body up with the arms until they are straight; and (4) carefully returning to a standing position; and c. a self arrest with an ice tool, to include: (1) falling head uphill, on the stomach by: (a) bringing the head of the ice tool up to the shoulder; (b) crossing the shaft over the body; (c) holding the pick with the opposite hand;	Demonstration and Performance	35 min	C2-295 (pp. 319–322) C2-296 (pp. 149–153)

TP	Description	Method	Time	Refs
	(d) rotating the top hand placing downward pressure on the head of the tool; (e) kicking the feet into the snow; (f) jabbing the pick of the tool into the snow; and (g) rolling the body weight over the adze of the ice tool; and (2) falling head uphill, on the back by: (a) bringing the head of the ice tool up to the shoulder; (b) crossing the shaft over the body; (c) holding the pick with the opposite hand; (d) rotating the top hand placing downward pressure on the head of the tool; (e) rolling toward the head of the ice tool; (f) jabbing the pick of the tool into the snow; (g) rolling the body weight over the adze of the ice tool; and (h) kicking the feet into the snow.			
TP4	Explain, demonstrate and have the cadets practice glacier travel in a roped team, by: a. tying into a roped team by: (1) attaching two carabiners to the secure attachment point of the sit harness; (2) adopting a position 8–10 m behind the rope team member to the front; (3) tying a figure of eight on a bight to the 10.5-mm kernmantle rope running between all team members; (4) securing the figure of eight on a bight to the sit harness using both of the carabiners attached to the secure attachment point;	Demonstration and Performance	40 min	C2-295 (pp. 330–331)

TP	Description	Method	Time	Refs
	(5) attaching a length of 7-mm kernmantle rope to the running end(s) (front and rear as required) of the 10.5-mm kernmantle rope using a prusik knot; and (6) securing the prusik knot(s) to the sit harness, through the secure attachment point, by tying an overhand knot; b. performing a final equipment check ensuring: (1) all buckles on the sit harness are secure; (2) both carabiners are locked and opposed; and (3) there is no tension on the prusik knots(s) attached to the running ends of the 10.5-mm kernmantle rope; c. moving effectively as a team by: (1) keeping the rope on the downhill side; (2) observing team members position and adjusting accordingly; (3) walking with the ice tool in the self belay position on the uphill side; (4) keeping the rope just slightly touching the ground; and (5) climbing or descending on a shortened rope; d. communicating effectively, to include: (1) articulating when a difficult move or dangerous area is approaching to increase or decrease tension in the rope; and (2) yelling “falling” if a rope team member falls; and e. executing a team arrest by: (1) quickly sitting on the ground; (2) driving the heel of the boot into the snow; (3) jabbing the pick of the ice tool into the snow;			

TP	Description	Method	Time	Refs
	(4) placing body weight over the tool; and (5) rolling over into the self arrest position if required.			

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Demonstration and Performance:	90 min
c.	Interactive Lecture:	20 min
d.	Total:	120 min

6. **Substantiation**:

a. An interactive lecture was chosen for TP 1 to inform the cadets of the safety considerations decided by the guide while on the glacier cycle.

b. A demonstration and performance was chosen for TPs 2—4 as it allows the instructor to explain and demonstrate how to tie into a roped team and the self belay and self arrest procedures while providing an opportunity for the cadets to practice each skill under supervision.

7. **References**:

a. C2-293 ISBN 978-0-89886-749-7 Houston, M. & Cosley, K. (2004). *Alpine climbing: Techniques to take you higher*. Seattle, WA: The Mountaineers Books.

b. C2-295 ISBN 978-0-89886-828-9 Cox, M. & Fulsaas, K. eds. (2003). *Mountaineering freedom of the hills* (7th ed). Seattle, WA: The Mountaineers Books.

c. C2-296 ISBN 978-0-7153-2844-1 Hill, P. (2008). *The complete guide to climbing and mountaineering*. Cincinnati, OH: David and Charles Ltd.

8. **Training Aids**:

a. Hiking boots,

b. Trekking pole,

c. Carabiners,

d. Sit harness,

e. 7-mm kernmantle rope,

f. Crampons,

g. Ice tool,

h. Helmet, and

i. 10.5-mm kernmantle rope.

9. **Learning Aids**:

   a. Hiking boots,

   b. Trekking pole,

   c. Carabiners,

   d. Sit harness,

   e. 7-mm kernmantle rope,

   f. Crampons,

   g. Ice tool,

   h. Helmet, and

   i. 10.5-mm kernmantle rope.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 9, S455 PC.

11. **Remarks**: Cadets will complete this EO in the training group established in EO S455.01 (Prepare for Mountaineering).

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EO S455.03

1. **Performance**: Mountaineer on a Glacier

2. **Conditions**:

   a. Given:

      (1) Hiking boots,

      (2) Trekking pole,

      (3) Carabiners,

      (4) Sit harness,

      (5) 7-mm kernmantle rope,

      (6) Crampons,

      (7) Ice tool,

      (8) Helmet,

      (9) Eye protection (sunglasses or goggles),

      (10) Activity equipment,

      (11) Personal equipment,

      (12) Group equipment,

      (13) Supervision, and

      (14) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Alpine and glacier conditions IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, during daylight hours, during favourable weather.

3. **Standard**: The cadet shall:

   a. identify glacier obstacles;

   b. demonstrate glacier travel techniques, to include:

      (1) ascending an incline, to include:

         (a) climbing in balance;

         (b) employing the step-kick; and

         (c) switchbacking to change direction; and

      (2) descending a decline, to include:

         (a) plunge-stepping, and

         (b) down-climbing; and

   c. practice crevasse rescue techniques.

4. **Teaching Points**:

a. Conduct a briefing, to include an explanation of:

(1) the objectives of the activity, such as:

(a) daily distance expectations,

(b) water refill locations,

(c) route overview, and

(d) trail etiquette;

(2) resources required, such as:

(a) personal equipment,

(b) group equipment,

(c) activity equipment, and

(d) daily water requirements; and

(3) any safety guidelines, such as:

(a) order of personnel,

(b) terrain,

(c) rest intervals, and

(d) boundaries.

b. Have the cadets hike along a route containing Class 1–Class 3 terrain to reach the base of the glacier.

c. Have the cadets establish a base camp.

d. While mountaineering on the glacier explain, demonstrate and have the cadets:

(1) execute the following glacier travel techniques, to include:

(a) ascending an incline, to include:

i. climbing in balance by:

(i) placing the ice tool above and ahead into the snow in the self-belay position;

(ii) moving up one step and repositioning the ice tool on the uphill side; and

(iii) avoiding prolonged periods of out-of-balance positions;

ii. employing the step-kick by:

(i) swinging the leg and allowing its weight to provide an impact to create the step;

(ii) ensuring the steps are spaced evenly and close together; and

(iii) ensuring the steps are level or tilted slightly into the slope;

iii. switchbacking to change direction by:

(i) starting from a position of balance and jabbing the ice tool into the snow at chest height;

(ii) moving the outside foot forward approximately one step and grasping the ice tool with both hands;

(iii) turning the inside foot and body toward the new direction of travel; and

(iv) returning to a position of balance; and

iv. employing the rest step by:

(i) beginning from an upright position;

(ii) stepping forward with the right leg, keeping the weight on the left (back) leg, with the knee locked;

(iii) pausing before taking the next step, with the weight still on the left (back) leg;

(iv) transferring the weight to the right leg;

(v) pushing up with the right leg and taking a step forward with the left leg;

(vi) locking the right knee, so that the right leg is bearing all the body weight;

(vii) pausing before taking the next step, with the weight still on the right (back) leg;

(viii) transferring the weight to the left leg;

(ix) pushing up with the left leg and taking a step forward with the right leg;

(x) pausing before taking the next step, with the weight still on the left (back) leg; and

(xi) continuing moving, walking at a slow and steady pace;

(b) descending a decline, to include:

i. plunge-stepping by:

(i) holding the ice tool in the self-arrest position;

(ii) placing the heel firmly into the snow with the leg vertical;

(iii) transferring the weight to the new position;

(iv) keeping the knees slightly bent to maintain balance;

(v) repeating Steps ii–iv while alternating legs; and

(vi) maintaining a steady rhythm; and

ii. down-climbing by:

(i) facing into the slope;

(ii) climbing down backward; and

(iii) kicking steps into the slope; and

(c) using the ice tool to cut steps, to include:

i. slash steps by:

(i) holding the tool parallel with the body, with the hand holding the bottom of the shaft and the adze pointing behind;

(ii) bending the knees and lowering the shoulder so the adze is just touching the surface of the snow;

(iii) swinging the arm, scraping the snow's surface to perform as many cuts as necessary to form a step;

(iv) angling each cut slightly into the slope to avoid slipping off;

(v) traversing uphill, placing each foot over the other into the step, and

(vi) using a zigzagging pattern every 10–12 steps; and

ii. creating pigeonhole steps for traversing on steep snow by:

(i) using the adze to create a series of holes, each wide enough to accept the width of a boot;

(ii) Placing each hole shoulder width apart; and

(iii) creating two or three holes in advance before stepping through;

(2) build one of the following anchors:

(a) ice screw anchor by:

i. chopping away the surface ice;

ii. chipping a small hole in the ice with the pick of the ice tool;

iii. placing the ice screw into the hole;

iv. feeling and looking for quality ice while turning the head of the ice screw;

v. sinking the screw to the hilt ensuring not to over tighten;

vi. placing another ice screw approximately 61 cm (24 inches) away from the first;

vii. arranging the eyelets in the direction of pull; and

viii. covering both ice screw heads with snow or ice to prevent solar melt out; or

(b) t-axe anchor by:

i. tying a long piece of webbing together to form a loop;

ii. digging a trench as long as an ice axe and perpendicular to the load;

iii. tying a girth hitch, with the long piece of webbing, to the shaft of an ice axe, underneath the head;

iv. placing the ice axe vertically in the middle of the trench;

v. cutting a slot in the snow that is as deep as the trench to let the webbing lie in the direction of pull;

vi. placing another ice axe perpendicular to the first and through the webbing loop forming a T;

vii. pushing both ice axes into the snow ensuring that the horizontal ice axe is resting on the bottom of the trench with the pick facing down;

viii. covering everything with snow except the tail of the webbing; and

ix. clipping in to the end of the webbing; and

(3) execute a crevasse rescue as a member of a team by:

(a) stopping a fall using a team arrest;

(b) communicating with the fallen member;

(c) building an anchor, appropriate to the surface conditions;

(d) transferring the load of the fallen member to the anchor; and

(e) implementing a system to haul the member out.

e. Discuss the following during breaks and teachable moments while on the glacier:

(1) glacier obstacles, to include:

(a) cornices,

(b) snow bridges,

(c) icefall hazards,

(d) rockfall hazards,

(e) depressions,

(f) bergschrunds,

(g) avalanche zones, and

(h) crevasses, to include:

i. crackers, and

ii. saggers; and

(2) planning a route on a glacier by:

(a) identifying obstacles;

(b) identifying ways around observed obstacles;

(c) identifying the safest route;

(d) positioning group for glacier travel; and

(e) identifying group travel techniques.

f. Conduct a group debriefing asking the cadets:

(1) how they felt about the activity;

(2) how they felt their team worked together;

(3) what portion of the activity challenged them the most;

(4) how their teammates assisted them when they were challenged; and

(5) what they would try to improve.

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Practical Activity:	1270 min
c.	Total:	1280 min

6. **Substantiation**: A practical activity was chosen for this activity as it is an interactive way for the cadets to practice mountaineering on a glacier in a safe, controlled environment. These activities contribute to the development of glacier travel techniques in a fun and challenging setting.

7. **References**:

a. C2-293 ISBN 978-0-89886-749-7 Houston, M., & Cosley, K. (2004). *Alpine climbing: Techniques to take you higher*. Seattle, WA: The Mountaineers Books.

b. C2-294 ISBN 978-0-89886-658-2 Selters, A. (1999). *Glacier travel & crevasse rescue*. Seattle, WA: The Mountaineers Books.

c. C2-295 ISBN 978-0-89886-828-9 Cox, M., & Fulsaas, K. (Eds.). (2003). *Mountaineering freedom of the hills* (7th ed). Seattle, WA: The Mountaineers Books.

d. C2-296 ISBN 978-0-7153-2844-1 Hill, P. (2008). *The complete guide to climbing and mountaineering*. Cincinnati, OH: David and Charles Ltd.

8. **Training Aids**:

   a. Hiking boots,

   b. Trekking pole,

   c. Carabiners,

   d. Sit harness,

   e. 7-mm kernmantle rope,

   f. Crampons,

   g. Ice tool,

   h. Helmet,

   i. Eye protection (sunglasses or goggles),

   j. Activity equipment,

   k. Personal equipment,

   l. Group equipment, and

   m. Snow / ice anchors.

9. **Learning Aids**:

   a. Hiking boots,

   b. Trekking pole,

   c. Carabiners,

   d. Sit harness,

   e. 7-mm kernmantle rope,

   f. Crampons,

   g. Ice tool,

   h. Helmet,

   i. Eye protection (sunglasses or goggles),

   j. Activity equipment,

   k. Personal equipment,

   l. Group equipment, and

   m. Snow / ice anchors.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 9, S455 PC.

11. **Remarks**:

a. Teachable moments are situations that naturally arise during the course of the day and provide an opportunity for discussion.

b. Cadets will complete this EO in the training group established in EO S455.01 (Prepare for Mountaineering).

c. The travel techniques are not required to be instructed in the order that they are presented in this lesson. Adapt the lesson to suit the terrain and available training conditions.

d. It is not necessary to have the cadets lead the group while route planning.

e. The anchor choice and haul system is based on the surface conditions of the glacier and will be left to the judgment of the guide.

PO S456

1. **Performance**: Ride a Horse on Established Trails
2. **Conditions**:
    a. Given:
        (1) Horse,
        (2) Tack, to include:
            (a) saddle blanket,
            (b) saddle, and
            (c) bridle;
        (3) Helmet,
        (4) Boots with heels,
        (5) Saddle bags as required,
        (6) Horse grooming kit,
        (7) Activity equipment,
        (8) Personal equipment,
        (9) Group equipment,
        (10) Supervision, and
        (11) Assistance as required.
    b. Denied: Nil.
    c. Environmental: Established trails suitable for novice riders.
3. **Standard**: The cadet will ride a horse on established trails, to include:
    a. caring for the horse, to include:
        (1) grooming, to include:
            (a) brushing;
            (b) cleaning the nose and eyes with a cloth;
            (c) picking the feet; and
            (d) checking the horse for abnormalities, such as:
                i. lumps,
                ii. bumps, and
                iii. abrasions;

(2) feeding; and

(3) watering;

b. tacking up the horse, to include:

(1) bridle,

(2) saddle blanket,

(3) saddle, and

(4) saddle bags as required;

c. mounting and dismounting the horse, to include:

(1) approaching the horse;

(2) mounting the horse, to include:

(a) keeping the left (right) rein slightly more taut than the right (left);

(b) clasping both reins and a handful of the mane of the horse with the left (right) hand;

(c) grasping the horn of the saddle with the right (left) hand;

(d) inserting the left (right) foot into the stirrup;

(e) standing up on the left (right) leg;

(f) swinging the right (left) leg over the saddle and into the stirrup;

(g) sitting in the saddle; and

(h) adjusting the stirrups;

(3) dismounting the horse, to include:

(a) keeping the left (right) rein slightly more taut than the right (left);

(b) clasping both reins and a handful of the mane of the horse with the left (right)hand;

(c) taking the right (left) leg out of the stirrup;

(d) swinging the right (left) leg over the saddle and placing it on the ground; and

(e) stepping out of the left (right) stirrup;

d. communicating with and leading the horse, to have it:

(1) move forward;

(2) turn; and

(3) stop; and

e. removing the tack, to include:

(1) saddle bags as required,

(2) saddle,

(3) saddle blanket, and

(4) bridle.

4. **Remarks**:

a. This PO is to be provided by technical specialists through a contracted service provider. The contract shall be initiated under the direction of RCSU (Prairie).

b. Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide will be assigned to each training group.

c. Activity equipment will depend on the service provider and shall include the following:

(1) communication device (eg, cellular phone or hand-held radio),

(2) first aid kit,

(3) at least one means of purifying water,

(4) topographical / trail map of area as required,

(5) compass, and

(6) bear spray / anti-predator device if travelling in bear / predator country.

d. Personal equipment shall consist of the following:

(1) rain gear,

(2) insulating layer (top),

(3) water carrier,

(4) day pack,

(5) personal essentials, to include:

(a) sunscreen,

(b) bug repellent, and

(c) lip balm.

e. A horse grooming kit shall include the following:

(1) hoof pick,

(2) curry comb,

(3) dandy brush,

(4) body brush,

(5) wash cloth, and

(6) mane comb.

f. Group and additional personal equipment for overnight will vary depending on the location and whether it is carried in or transported by vehicle.

EO S456.01

1. **Performance**: Prepare for Horseback Riding

2. **Conditions**:

   a. Given:

      (1) Horse,

      (2) Tack, to include:

         (a) saddle blanket,

         (b) saddle, and

         (c) bridle;

      (3) Helmet,

      (4) Boots with heels,

      (5) Saddle bag,

      (6) Activity equipment,

      (7) Personal equipment,

      (8) Group equipment,

      (9) Supervision, and

      (10) Assistance as required.

   b. Denied: Nil.

   c. Environmental: Training area large enough to accommodate the entire group.

3. **Standard**: The cadet shall:

   a. discuss types of horses;

   b. identify the points of a horse;

   c. discuss horse safety; and

   d. identify equipment for horseback riding, to include:

      (1) saddle blanket,

      (2) saddle,

      (3) bridle,

      (4) helmet,

      (5) boots, and

      (6) saddle bags as required.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Conduct a group discussion in which the cadets will: a. identify simularities between leading a horse and leading a team / group of subordinates; and b. discuss the importance and benefit of having a funtional leader / follower relationship.	Group Discussion	15 min	
TP2	Identify and explain the differences between breeds of trail horses, to include: a. gaited, to include: (1) American Saddlebred, (2) Tennessee, (3) Fox Trotter, and (4) Peruvian Paso; and b. nongaited, to include: (1) Morgan, (2) American Quarter, (3) American Paint, (4) Arabian, and (5) Appaloosa.	Interactive Lecture	10 min	C2-297 (pp. 44–70)
TP3	Identify the following points of a horse: a. gaskin, b. thigh buttock, c. croup, d. loin, e. back, f. withers, g. crest, h. poll, i. forehead, j. nostril, k. muzzle, l. lips, m. throat latch, n. neck, o. shoulder,	Interactive Lecture	15 min	C2-297 (p. 22)

TP	Description	Method	Time	Refs
	p. crest, q. knee, r. cannon, s. pastern, t. coronet, u. hoof, v. fetlock, w. girth, x. barrel, and y. stifle.			
TP4	Have the cadets, in two groups, brainstorm safe horse handling procedures, which include but are not limited to: a. never wrapping the lead rope around the hand; b. choosing appropriate clothing for the conditions; c. letting the horse know that you are approaching; d. approaching the horse from the shoulder; and e. staying out of kicking range. Note: Have one cadet in each group act as the writer. The cadets should brainstorm for no more than 10 minutes. After 10 minutes, the groups should compare answers.	In-Class Activity	15 min	C2-297 (pp. 74–78)
TP5	Identify the following horseback riding equipment, to include: a. saddle blanket, b. saddle, to include: (1) horn, (2) pommel, (3) gullet, (4) strap holder, (5) front rigging dee, (6) belvins, (7) hobble strap, (8) stirrup, (9) tread cover, (10) fender,	Interactive Lecture	15 min	C2-297 (p. 202) C2-298 C2-299

TP	Description	Method	Time	Refs
	(11) seat jockey, (12) leather rigging guard, (13) billet strap, (14) rear rigging dee, (15) back housing, (16) cantle, (17) seat, and (18) seat rise; c. bridle, to include: (1) throat latch, (2) crown piece, (3) brow band, (4) cheek piece, (5) reins, (6) bit, and (7) nose band; d. helmet, e. boots, f. saddle bags, and g. clothing.			

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Group Discussion:	15 min
c.	Interactive Lecture:	40 min
d.	In-Class Activity:	15 min
e.	Total:	80 min

6. **Substantiation**:

a. A group discussion was chosen for TP 1 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings on the link between leading a horse and leading a team / group of subordinates.

b. An interactive lecture was chosen for TPs 2, 3 and 5 to introduce the cadets to the differences between breed of trail horses, the points of a horse and the equipment used while on horseback.

c. An in-class activity was chosen for TP 4 as it is an interactive way to provoke thought and stimulate interest among cadets in safe horse handling procedures.

7. **References**:

   a. C2-297 ISBN 01-59228-251-2 Aadland, D. (2004). *The complete trail horse*. Guilford, CT: The Lyons Press.

   b. C2-298 The Saddle Shop. (2003). *Parts of a saddle*. Retrieved November 23, 2009, from http://lib.store.yahoo.net/lib/thesaddleshop/saddleparts.jpg

   c. C2-299 P5 Equestrian. (2009). *Parts of a bridle*. Retrieved November 23, 2009, from http://www.p5equestrian.com/index.htm

8. **Training Aids**:

   a. Presentation aids (eg, whiteboard / flip chart / OHP) appropriate for the classroom / training area,

   b. Photos of breeds of horses,

   c. Paper / pens,

   d. Horse,

   e. Tack, to include:

      (1) saddle blanket,

      (2) saddle, and

      (3) bridle;

   f. Helmet,

   g. Boots with heels, and

   h. Saddle bags.

9. **Learning Aids**: Nil

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 10, S456 PC.

11. **Remarks**: Prior to the commencement of this PO, the cadets shall be divided into four training groups. Cadets will remain in their assigned groups for the remaining lessons in this PO. Group division is based on cadets' language, gender, physical fitness and instructor-to-cadet ratio requirements IAW A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*. A minimum of one guide will be assigned to each training group.

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EO S456.02

1. **Performance**: Perform Horse Care Duties
2. **Conditions**:
    a. Given:
        (1) Horse,
        (2) Tack, to include:
            (a) saddle blanket,
            (b) saddle, and
            (c) bridle;
        (3) Helmet,
        (4) Boots with heels,
        (5) Saddle bags as required,
        (6) Horse grooming kit,
        (7) Water,
        (8) Horse feed,
        (9) Activity equipment,
        (10) Personal equipment,
        (11) Group equipment,
        (12) Supervision, and
        (13) Assistance as required.
    b. Denied: Nil.
    c. Environmental: Training area large enough to accommodate the entire group.
3. **Standard**: The cadet shall:
    a. approach a horse;
    b. feed a horse;
    c. give water to a horse;
    d. groom a horse, to include:
        (1) brushing;
        (2) cleaning the face with a cloth;
        (3) picking the feet; and

(4) checking the horse for abnormalities, such as:

(a) lumps,

(b) bumps, and

(c) abrasions;

e. tack up and remove tack from a horse, to include:

(1) bridle,

(2) saddle blanket,

(3) saddle, and

(4) saddle bags as required; and

f. cool down a horse.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Explain, demonstrate and have the cadets practice approaching a horse by: a. keeping in eyesight of the horse; b. moving toward the shoulder of the horse; c. speaking with a firm and confident voice; d. firmly touching the horse's shoulder; and e. watching the horse's ears and face which may indicate a change in attitude.	Demonstration and Performance	15 min	C2-297 (pp. 75–76)
TP2	Explain, demonstrate and have the cadets practice: a. tying a horse to a stall; b. feeding a horse; and c. giving water to a horse.	Demonstration and Performance	15 min	
TP3	Explain, demonstrate and have the cadets practice grooming a horse by: a. brushing in small circles with a rubber curry comb around the fleshy parts of the horse's body; b. brushing with a dandy brush to remove mud and displaced hair by the curry comb; c. smoothing the coat with a medium bristle brush;	Demonstration and Performance	30 min	C2-301

TP	Description	Method	Time	Refs
	d. combing the mane and tail by: (1) holding a section of hair; (2) starting at the bottom; and (3) moving to the top; e. picking the feet with a hoof pick by: (1) standing beside the horse's leg facing to the rear; (2) sliding the hand down the leg reaching the hoof; (3) pulling up on the hair of the fetlock to lift the foot; (4) using the foot pick to slowly pick out debris from the sole of the foot, paying special attention to the grooves of the frog; and (5) lowering the foot slowly; f. wiping the face with a soft cloth; and g. checking the coat for any abnormalities, such as: (1) lumps, (2) bumps, and (3) abrasions.			
TP4	Explain, demonstrate and have the cadets tack a horse, to include: a. bridling a horse by: (1) removing the halter; (2) standing facing the front of the horse at the left side; (3) placing the shoulder at the horse's jowls with the bridle in the left hand; (4) placing the right hand under the horse's neck and on the right side of the horse; (5) holding the horse's head with the right hand, and sliding the top of the bridle up the horse's muzzle and toward the ears with the left hand; (6) holding the bit about level with the horse's mouth and placing it gently against the horse's lips / front teeth;	Demonstration and Performance	70 min	C2-297 (pp. 79–81)

TP	Description	Method	Time	Refs
	(7) placing the bit into the horses mouth so it sits in the soft area where there are no teeth; (8) finishing the bridle by placing the horse's ears and forelock into the proper area at the top of the bridle; and (9) placing the chin strap under the horse's chin and buckling the strap by the jugular area; and b. saddling a horse by: (1) placing the saddle blanket just in front of the horse's withers; (2) placing the saddle on top of the pad or saddle blanket so the front of the saddle is just in front of the horse's withers and centered; (3) buckling the girth so that it is snug around the horse's stomach, just behind the front legs; (4) tightening the girth so that a finger can just slip between the girth and the horse's stomach; (5) buckling the back girth if available; and (6) adjusting the stirrups.			
TP5	Explain and demonstrate the procedure for cooling down a horse, to include: a. loosening the girth after dismounting; b. walking the horse to the stall / resting area; c. removing the saddle; d. wiping the horse with a towel; e. walking the horse with the bridle / halter until calm; and f. giving the horse some cool (not cold) water.	Demonstration	20 min	C2-300

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Demonstration and Performance:	130 min
c.	Demonstration:	20 min
d.	Total:	160 min

6. **Substantiation**:

   a. A demonstration and performance was chosen for TPs 1–4 as it allows the instructor to explain and demonstrate how to approach, feed, groom and tack a horse while providing an opportunity for the cadets to practice each skill under supervision.

   b. A demonstration was chosen for TP 5 as it allows the instructor to explain and demonstrate how to cool down a horse while providing an opportunity for the cadets to view the process in a controlled environment.

7. **References**:

   a. C2-297 ISBN 01-59228-251-2 Aadland, D. (2004). *The complete trail horse. Guilford*, CT: The Lyons Press.

   b. C2-300 E How: How to do just about everything. (2009). *How to warm up and cool down a horse*. Retrieved November 24, 2009, from http://www.wikihow.com/Cool-Down-a-Horse-After-Hard-Work.

   c. C2-301 E How: How to do just about everything. (2009). *How to groom a horse*. Retrieved November 23, 2009, from http://www.ehow.com/how_4806313_groom-a-horse.html

8. **Training Aids**:

   a. Horse,

   b. Tack, to include:

      (1) saddle blanket,

      (2) saddle, and

      (3) bridle;

   c. Helmet,

   d. Boots with heels,

   e. Saddle bags,

   f. Horse grooming kit,

   g. Water,

   h. Horse feed, and

   i. Activity equipment.

9. **Learning Aids**:

   a. Horse,

   b. Tack, to include:

      (1) saddle blanket,

      (2) saddle, and

      (3) bridle;

c. Saddle bags,

d. Horse grooming kit,

e. Water, and

f. Horse feed.

10. **Test Details**: This EO is assessed IAW Chapter 3, Annex B, Appendix 10, S456 PC.

11. **Remarks**: Cadets will complete this EO in the training group established in EO S456.01 (Prepare for Horseback Riding).

EO S456.03

1. **Performance**: Ride a Horse on Established Trails
2. **Conditions**:
    a. Given:
        (1) Horse,
        (2) Tack, to include:
            (a) saddle blanket,
            (b) saddle, and
            (c) bridle;
        (3) Helmet,
        (4) Boots with heels,
        (5) Saddle bags as required,
        (6) Horse grooming kit,
        (7) Activity equipment,
        (8) Personal equipment,
        (9) Group equipment,
        (10) Supervision, and
        (11) Assistance as required.
    b. Denied: Nil.
    c. Environmental: Horseback riding trails suitable for novice level riders.
3. **Standard**: The cadet shall:
    a. lead a horse;
    b. mount a horse;
    c. demonstrate proper horse-riding posture;
    d. communicate with and lead a horse, to have it:
        (1) move forward;
        (2) turn; and
        (3) stop; and
    e. dismount a horse.

4. **Teaching Points**:

TP	Description	Method	Time	Refs
TP1	Explain, demonstrate and have the cadets lead a horse by: a. attaching the lead rope to the halter; b. standing on the left-hand side of the horse at its shoulder, hold the lead rope about 20 centemetres (eight inches) from the clasp with the right hand; c. holding the end of the lead rope, folded to fit comfortably in the left hand; d. cueing the horse to walk by gently tugging the rope; and e. stopping the horse by pulling back gently on the lead rope.	Demonstration and Performance	15 min	C2-297 (p. 75, p. 78, p, 116)
TP2	Explain, demonstrate and have the cadets: a. mount a horse by: (1) keeping the left rein slightly more taut than the right; (2) clasping both reins and a handful of the horse's mane with the left hand; (3) grasping the horn of the saddle with the right hand; (4) inserting the left foot into the stirrup; (5) standing up on the left leg; (6) swinging the right leg over the saddle and into the stirrup; (7) sitting in the saddle; and (8) adjusting the stirrups; and b. dismount a horse by: (1) keeping the left rein slightly more taut than the right; (2) clasping both reins and a handful of the mane of the horse with the left hand; (3) taking the right leg out of the stirrup; (4) swinging the right leg over the saddle and placing it on the ground; and (5) stepping out of the left stirrup.	Demonstration and Performance	30 min	C2-297 (pp. 82–85)

TP	Description	Method	Time	Refs
TP3	Explain and demonstrate proper horseback riding posture, to include: a. sitting in the middle of the saddle; b. sitting tall; c. relaxing; d. keeping the shoulders back; e. hanging the legs loose on each side; f. pointing the feet forward running parallel with the knee; and g. placing the heal underneath the front of the hips and just below the toes.	Demonstration	5 min	C2-297 (p. 89)
TP4	Explain and demonstrate effective horseback riding posture while: a. riding uphill by: (1) riding with proper posture; and (2) leaning forward; and b. riding downhill by: (1) riding with proper posture; and (2) sitting straight or leaning slightly forward.	Demonstration	5 min	C2-297 (p. 89)
TP5	Explain, demonstrate and have the cadets communicate with a horse to have it: a. move forward by: (1) giving a slight amount of slack with the reins; and (2) pressing in to the sides of the horse with both heels; b. turn by: (1) releasing the reins on one side while pulling slightly on the other; and (2) pressing in to the side of the horse with the heel in the direction of travel; and c. stop by pulling back slowly on both the right and left reins.	Demonstration and Performance	30 min	C2-297 (pp. 129–133)

TP	Description	Method	Time	Refs
TP6	Conduct a trail ride on established trails where the cadets will practice the following: a. proper riding posture; b. effective communication between rider and horse; and c. proper grooming techniques.	Practical Activity	545 min	

5. **Time**:

a.	Introduction / Conclusion:	10 min
b.	Demonstration and Performance:	75 min
c.	Demonstration:	10 min
d.	Practical Activity:	545 min
e.	Total:	640 min

6. **Substantiation**:

a. A demonstration and performance was chosen for TPs 1, 2, and 5 as it allows the instructor to explain and demonstrate how to lead, mount and dismount a horse and how to communicate with a horse while providing an opportunity for the cadets to practice each skill under supervision.

b. A demonstration was chosen for TPs 3 and 4 as it allows the instructor to explain and demonstrate horseback riding posture, while providing an opportunity for the cadets to view the demonstration in a controlled environment.

c. A practical activity was chosen for TP 6 as it is an interactive way for the cadets to practice riding a horse on established trails in a safe and controlled environment. This activity contributes to the development of horseback riding techniques in a fun and challenging setting.

7. **References**: C2-297 ISBN 01-59228-251-2 Aadland, D. (2004). *The complete trail horse*. Guilford, CT: The Lyons Press.

8. **Training Aids**:

a. Horse,

b. Tack, to include:

(1) saddle blanket,

(2) saddle, and

(3) bridle;

c. Helmet,

d. Boots with heels,

e. Saddle bags as required,

f. Horse grooming kit,

g. Activity equipment,

h. Personal equipment, and

i. Group equipment.

9. **Learning Aids**:

a. Horse,

b. Tack, to include:

(1) saddle blanket,

(2) saddle, and

(3) bridle;

c. Helmet,

d. Boots with heels,

e. Saddle bags as required,

f. Horse grooming kit,

g. Activity equipment,

h. Personal equipment, and

i. Group equipment.

10. **Test Details**: EO is assessed IAW Chapter 3, Annex B, Appendix 10, S456 PC.

11. **Remarks**: Cadets will complete this EO in the training group established in EO S456.01 (Prepare for Horseback Riding).

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ANNEX A

INSTRUCTIONAL METHODOLOGIES AND THEIR APPLICATIONS

METHOD	DEVELOPMENTAL PERIOD ONE AGES 12 – 14 EXPERIENCE-BASED	DEVELOPMENTAL PERIOD TWO AGES 15 – 16 DEVELOPMENTAL	DEVELOPMENTAL PERIOD THREE AGES 17 – 18 COMPETENCY
Behaviour Modeling	Not applicable	Not applicable	Applicable
Case Study	Not applicable	Applicable	Applicable
Demonstration and Performance	Applicable	Applicable	Applicable
Experiential Learning	Applicable	Applicable	Applicable
Field Trip	Applicable	Applicable	Applicable
Game	Applicable	Applicable	Applicable
Group Discussion	Applicable	Applicable	Applicable
Guided Discussion	Not applicable	Not applicable	Applicable
In-class Activity	Applicable	Applicable	Applicable
Interactive Lecture	Applicable	Applicable	Applicable
Lecture	Applicable	Applicable	Applicable
On-the job Training (OJT)	Not applicable	Not applicable	Applicable
Peer Learning	Not applicable	Not applicable	Applicable
Practical Activity	Applicable	Applicable	Applicable
Problem-based Learning	Not applicable	Applicable	Applicable
Role Play	Not applicable	Applicable	Applicable
Self-Study	Not applicable	Not applicable	Applicable
Seminar Method	Not applicable	Not applicable	Applicable
Simulation	Not applicable	Not applicable	Applicable
Tutorial	Not applicable	Not applicable	Applicable

General information follows on each method for its age-appropriateness, definition, application, advantages and disadvantages.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
BEHAVIOUR MODELING Under development			
CASE STUDY Cadets are given a written problem, situation or scenario, to which they respond either individually or as a group in order to achieve a performance objective. The problem situation or scenario should match the experience level of the cadets and they should be given enough time either before or during the instructional period to analyze it. Responses to the case should be recorded under four headings: Facts, Assumptions, Problems and Solutions	1. Learning principles, attitudes and concepts.	1. Effective application of teaching principles instead of “preaching”. 2. Cadets can help each other learn. 3. High energy and perfect demonstrations. 4. Can be easily related to a real life situation in the past and for future applications.	1. Must be well organized and facilitated in order to ensure learning takes place.
DEMONSTRATION AND PERFORMANCE Cadets observe the instructor performing the task in a demonstration, and rehearse it under the supervision of the instructor. A good example of this is drill instruction, where cadets are shown a movement and given the opportunity to practice and perform it. **Demonstration Method** A method of instruction where the instructor, by actually performing an operation or doing a job, shows the cadet what to do, how to do it and through explanations brings out why, where and when it is done.	**Demonstration Method** 1. To teach manipulative hands-on operations or procedures. 2. To teach troubleshooting. 3. To illustrate principles. 4. To teach operation or functioning of equipment. 5. To teach teamwork. 6. To set standards of workmanship. 7. To teach safety procedures.	**Demonstration Method** 1. Minimizes damage and waste. 2. Saves time. 3. Can be presented to large groups.	**Demonstration Method** 1. Requires careful preparation and rehearsal. 2. Requires special classroom arrangements. 3. Requires equipment and aids.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
Performance Method A method in which the cadet is required to perform, under controlled conditions, the operations, skill or movement being taught.	**Performance Method** 1. To teach manipulative hands-on operations or procedures. 2. To teach operations or functioning of equipment. 3. To teach team skills. 4. To teach safety procedures.	**Performance Method** 1. Builds confidence. 2. Enables learning evaluation. 3. Reduces damage and waste. 4. Promotes safety.	**Performance Method** 1. Requires tools and equipment. 2. Requires large blocks of time. 3. Requires more instructors.
EXPERIENTIAL LEARNING Learning in the cadet program is centred on experiential learning. This involves learning knowledge and skills from direct experience. People learn best from their own experiences and can then apply the knowledge and skills in new situations. The four stages of the cycle may be considered and applied to all activities within the Cadet Program, regardless of methodology chosen. **Stage 1: Concrete Experience:** Cadets have an experience and take time to identify and define what the experience is. Sample activities: direct observations, simulations, field trips, reading. **Stage 2: Reflective Observation:** Cadets need to reflect on and examine what they saw, felt and thought while they were having the experience. Sample activities: discussion, journals / logs, and graphs. **Stage 3: Abstract Conceptualization:** Cadets work to understand and make connections from the experience to new or different situations. Sample activities: interview, discussion, model building, analogies and planning. **Stage 4: Active Experimentation:** Cadets look ahead to and plan the application of skills and knowledge acquired to future experience. Sample activities: simulation, fieldwork. Note: The cycle is ongoing as each learning experience builds on another.	1. To teach practical skills. 2. To learn how to learn. 3. To teach transferable skills. 4. To teach the process or principle. 5. To teach problem solving.	1. Knowledge is shared and created by everyone. 2. Everyone is actively involved in the teaching – learning process. 3. Numerous resources are used. 4. Cadet based.	1. Many resources are required (may be expensive). 2. Needs a lot of planning, preparation and organization prior to activity. 3. The instructor must master the subject developed. 4. Instructor needs very good pedagogical skills. 5. May not be a good process for learning details.
FIELD TRIP Theoretical knowledge is reinforced through participation in an activity in a real-life setting. Prior planning helps to ensure all pre-training and safety standards are met. Field trip activities are planned and carried out to achieve clear instructional objectives that are understood by the cadets. Examples can include trips to areas of local interest, flying / gliding, hikes or boat trips.	1. Awareness of historical situations. 2. Can be used in conjunction with many other instructional methods. 3. To introduce / illustrate and confirm topics.	1. Immerse cadets in a specific environment.	1. May be difficult to control. 2. Needs much organization and preparation. 3. May have cost involved.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
GAME Games are used with one or more participants to practice skills, apply strategies and enhance teams. It is critical that the game supports learning through the provision of a challenging activity that allows for the skill practice or knowledge confirmation. Games are a fun and interesting way to introduce a topic, expand cadets' understanding knowledge of topic or review material.	1. Practical situations. 2. Discovery of concepts and principles. 3. Review and confirmation. 4. Games include rules and assessment.	1. Fun, interesting. 2. Creates ownership. 3. Highly participative. 4. Many resources involved.	1. May stratify the group by creating a winner and a loser. 2. May be difficult to providing instructor feedback.
GROUP DISCUSSION Cadets discuss issues, share knowledge, opinions and feelings about a topic in small groups to a specific goal. The instructor's questioning is flexible and minimal, and aims at encouraging cadets to explore their own experiences and opinions through peer interaction.	1. To develop imaginative solutions to problems. 2. To stimulate thinking and interest and to secure cadet participation. 3. To emphasize main teaching points. 4. To supplement lectures. 5. To determine how well cadets understand the concepts and principles. 6. To prepare cadets for application of theory or procedure. 7. To summarize, clarify points or review. 8. To prepare cadets for instruction that will follow. 9. To determine cadet progress and effectiveness of prior instruction.	1. Increases cadet interest. 2. Increases cadet acceptance and commitment. 3. Utilizes cadet knowledge and experience. 4. Results in more permanent learning because of the high degree of cadet participation / cognitive involvement.	1. Requires highly skilled instructors. 2. Required preparation by cadets. 3. Limits contents. 4. Consumes time. 5. Restricts size of group. 6. Requires selective group composition.
GUIDED DISCUSSION Cadets are guided to reach performance objectives by drawing out their opinions, knowledge, experience and capabilities through a series of open ended lead-off questions, responses and follow-up questions. The instructor summarizes throughout and concludes effectively to ensure the performance objective is met.	1. When cadets are already familiar with the subject. 2. When the instructor wishes the cadets to learn through a series of structured questions.	1. The sharing of information, experiences and opinions by the group leads to the achievement of the teaching points and overall lesson objective.	1. Takes time to prepare. 2. The instructor must ensure that the cadets stay on the subject. 3. Off-topic questions must be handled with tact.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
IN-CLASS ACTIVITY In-class activities encompass a wide variety of activity-based learning opportunities that can be used to reinforce instructional topics or to introduce cadets to new experiences. In-class activities should provoke thought and stimulate interest among cadets, while maintaining relevance to the performance objectives. Examples of these activities include learning stations, videos, brainstorming / debating.	1. To reinforce instructional topics. 2. To orient cadets to the subject. 3. To introduce a subject. 4. To give direction on procedures. 5. To present basic material. 6. To introduce a demonstration, discussion or performance. 7. To illustrate the application of rules, principles or concepts. 8. To review, clarify, empathize or summarize.	1. To provoke thought and stimulate interest among cadets, while maintaining relevance to the performance objectives. 2. Permits flexibility with class size. 3. Requires less rigid space requirements. 4. Permits adaptability. 5. Permits versatility. 6. Permits better control over content and sequence.	1. Encourages cadet passiveness. 2. Difficult to gauge cadet reaction. 3. Takes time to prepare.
INTERACTIVE LECTURE The instructor-driven methodology combines both lecture and interaction to meet lesson objectives. Lecture portions of the lesson are offset with relevant activities such as videos with discussion, games to confirm and completion of handouts.	1. To orient cadets to the subject. 2. To introduce a subject. 3. To give instruction on procedures. 4. To present basic material. 5. To illustrate the application of rules, principles or concepts. 6. To review, clarify, empathize or summarize.	1. Saves time. 2. Permits flexibility of class size. 3. Requires less rigid space requirements. 4. Permits adaptability. 5. Permits versatility. 6. Permits better control over content and sequence.	1. Involves one-way communication. 2. Poses problems in skill teaching. 3. Encourages passive behaviour. 4. Difficult to gauge cadet reaction. 5. Requires highly skilled instructors. 6. Requires a high level of concentration from the cadets.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
LECTURE This is a formal or semi-formal discourse in which the instructor presents a series of events, facts, principles, explores a problem or explains relationships.	1. To orient cadets to the subject. 2. To introduce a subject. 3. To give instruction on procedures. 4. To present basic material. 5. To illustrate the application of rules, principles or concepts. 6. To review, clarify, empathize or summarize.	1. Proficient oral skills are required. 2. Useful for big groups. 3. Saves time because of fewer interruptions.	1. Should have a clear introduction and conclusion. 2. Cadets may be passive and uninvolved.
ON-THE JOB TRAINING (OJT) OJT prepares cadets to perform a job within the cadet program. Cadets learn job related behaviours / skills and the practice them through performance on the job. An instructor facilitates learning and coaches each cadet through the process. All cadets have the opportunity to reflect and provide feedback on their performance. Besides learning the job skills, cadets practice and refine peer and self-evaluation skills and skills in providing feedback.	1. Appropriate for learning leadership positions and learning supervisory responsibilities. 2. Learn to perform numerous tasks and responsibilities that would otherwise be listed.	1. Gives ownership to the learner to learn required skills. 2. Potential for a rewarding a situation. 3. Challenging.	1. Should be used in low risk activity or situations. 2. Extensive supervision is required to ensure proper content is covered. 3. May be a very challenging learning curve. 4. Requires an appropriate debriefing.
PEER LEARNING Cadets in the same class teach each other. This allows cadets to learn from each other while also developing coaching, feedback and instructional skills.	1. Review. 2. Areas of expertise. 3. Practicing instructional techniques. 4. In practical situations such as leadership development, parade appointments, etc.	1. Teenagers can be especially receptive to learning from their peer group. 2. By instructing, cadets should master the material they are presenting. 3. Offers good opportunity to evaluate instructional techniques and leadership.	1. If cadets do not master the material presented or lack the instructional skills, the class may not be successful. 2. A good debriefing is often required to ensure the learning is correct and emphasis was on the right objectives.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
PRACTICAL ACTIVITY Practical activities encompass a wide variety of activity-based learning opportunities that can be used to reinforce and practice instructional topics or to introduce cadets to new experiences. Practical activities should stimulate interest among cadets and encourage their participation, while maintaining relevance to the performance objectives.	1. Review. 2. In practical situations such as leadership development, parade appointments, etc. 3. To introduce a subject.	1. Encourage participation by cadets. 2. Stimulate interest in the subject. 3. Maintain relevance to the performance objectives. 4. Fun and interesting. 5. Creates ownership. 6. Highly participative in small groups. 7. Many resources involved.	1. Extensive supervision is required to ensure proper content is covered. 2. Takes time to prepare. 3. Not suitable for large groups.
PROBLEM-BASED LEARNING Cadets analyse a problem, apply the steps in the problem solving method and work toward solving the problem in small groups. Problem-based learning requires cadets to participate and interact with each other while developing critical thinking skills. Instructors choose problem that stimulate thought, reinforce learning and relate to the cadets' interest and needs. Throughout the exercise, instructors pose thought-provoking questions and guide cadets without influencing their decisions.	1. Review. 2. In practical situations such as leadership development, parade appointments, etc.	1. Encourage participation by cadets. 2. Stimulate interest in the subject. 3. Maintain relevance to the performance objectives. 4. Many resources involved.	1. Critical thinking skills are required. 2. Broad knowledge of the subject matter is required.
ROLE PLAY Cadets are assigned roles requiring them to interact with others in responding to various realistic situations. The instructor identifies the purpose of the role-play, provides the cadets with enough background information to help them accurately play their assigned role, and motivates them to become more fully involved in the activity. De-brief after the role-play is essential to connect the activity with the PO / EO.	1. Skills associated with social systems or human interactions; practical situations eg. CHAP, discipline issues, behaviour on the range, leadership, instructional techniques. 2. Attitudinal objectives.	1. High participation, interactive delivery and may lead to discussions. 2. Experience is developed in a supportive environment. 3. Can be very versatile depending on application eg, introduce a topic, mid-stage learning or as confirmation.	1. Participants can be easily side-tracked, need for good preparation and controls must be set appropriately. 2. Competence, experience and prepared instructors required.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
SELF-STUDY In a self-study method, the instructor provides materials and instructions to the cadets, then they learn the topic independently (learning at their own pace) often using a prepared package of information, written content, computer based learning, using videos, tapes (CDs) or models. Self-study does not need to be complex or in-depth; instructors can include self-study components as part of an interactive lesson or as a method on its own.	1. To provide remedial instruction. 2. To provide make-up instruction. 3. To maintain previously learned skills, which are not performed frequently enough. 4. To provide retraining on equipment and procedures that have become obsolete. 5. To upgrade production. 6. To accelerate capable cadets. 7. To provide enough common background among cadets. 8. To provide the review and practice of knowledge and skills.	1. Reduces failure rates. 2. Improves end-of-course proficiency. 3. Saves time. 4. Provides for self-instruction. 5. Improves efficiency and economy for group or individualized instruction. 6. Reduces instructor implication. 7. Allows for very personalized feedback if present.	1. Requires local or commercial preparation. 2. Requires lengthy programmer training. 3. Increases expenses. 4. Requires considerable lead times. 5. Poses administrative problems. 6. Requires follow-up, feedback or evaluation in order to ensure learning is up to standard. 7. Requires a great deal of discipline from the learner.
SEMINAR METHOD This is a tutorial arrangement involving the instructor and group, rather than instructor and individual.	1. To provide general guidance for group working on an advanced study or research project. 2. To exchange information on techniques and approaches being explored by members of a study or research groups. 3. To develop new and imaginative solutions to problems under study by the group.	1. Provides motivation and rapport. 2. Stimulates active participation. 3. Permits adaptive instruction.	1. Requires highly competent instructors. 2. Poses evolution problems. 3. Is more costly than most other methods.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
SIMULATION Simulation is a realistic representation of a situation (that cannot take place in the real environment) used to teach performance objectives without risk or complication. Cadets are active participants in the learning process. Instructor feedback is critical for learning. Many activities can be simulated (eg, first aid, leadership principles, dry firing).	1. Attitudinal objectives.	1. Cadets acquired the skills to conduct activities in the real environment. 2. Cadets receive critical feedback. 3. Allows for exploration of solutions. 4. Provides opportunity to practice skills.	1. Not applicable for large groups. 2. Cadets may be self-conscious.
TUTORIAL The instructor works directly with the cadets to ensure the successful achievements of the learning objectives. This is a useful way to teach highly complex skills, knowledge and procedures, or to provided remedial training to cadets. This method focuses on the cadet's needs and the individualized assistance provided it motivating for the cadet. Tutorials are easily adaptable to the cadet's learning pace and style.	1. To teach highly complex skills and operations or operations involving danger or expensive equipment. 2. To provided individualized remedial assistance. 3. During a debriefing where learning must take place eg, monitoring.	1. Permits adaptive instruction. 2. Stimulates active participation. 3. Promotes safety.	1. Requires highly competent instructors. 2. Demands time and money.

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ANNEX B

ON-THE-JOB TRAINING (OJT) SPECIALTY

PURPOSE

1. The purpose of this OJT is to provide the cadet an authentic experience that allows them to closely interact with an experienced civilian guide to gain insight into practical leadership requirements during an expedition. This activity is intended to be experiential in nature providing the cadet the opportunity to work alongside the civilian guide throughout the day's training.

GENERAL INSTRUCTIONS

2. For a minimum of one day, during a cycle of the cadet's choice, the cadet shall be assigned the duties of team leader and be given the opportunity to shadow a civilian guide.

3. The team leader shall closely communicate with and assist the civilian guide as they guide the team through the day's scheduled activities. The cadet will only shadow the civilian guide during the execution of training as per the schedule. It is important for the civilian guide to include the team leader in all aspects of the day's training—decisions in relation to site locations, reacting to changes in weather, pairing up cadets for training, and route selection. The civilian guide should be cognizant of ensuring that the team leader is aware of not only the decisions being made, but why that specific decision was made.

4. During this OJT experience, the cadet will also be assessed as a team leader as part of PO S403 (Lead a Team During an Outdoor Adventure Activity). Team leader duties should commence / end at approximately 2000 hrs each day. By commencing / ending at 2000 hrs, the incoming cadet, when tasked as a team leader, will be given the opportunity to prepare the team for the next day's activities and end their experience with a session of individual and group reflection. The duration of the assignment shall extend beyond the eight periods of training to include both the morning and evening routines (eg, from the time the cadets wake up until lights out).

5. With the assistance of the civilian guide, the platoon commander or adult designate is responsible for:

   a. ensuring the cadet is briefed on their responsibilities and the team's schedule for the day;

   b. ensuring the cadet is provided opportunities to directly interact with the civilian guide and provided with insight into the decision making and leadership requirements associated with that position;

   c. completing the PO S403 (Lead a Team During an Outdoor Adventure Activity) assessment; and

   d. debriefing the team leader upon completion of the OJT experience.

TASKS

6. Tasks of the team leader are detailed in the PO S403 (Lead a Team During an Outdoor Adventure Activity) assessment.

SCHEDULING

7. The members of each team shall determine the team schedule for the OJT, based on experience and expertise. For example, a cadet who has advanced mountain biking skills may be nominated by the team to lead during a mountain biking day. Having the team determine the OJT order will help ensure that each cadet has a positive experience that is inline with the stated purpose.

8. There will be many opportunities for cadets to complete OJT. Cadets shall not be scheduled on a day off. Cadets may be scheduled for more than one OJT experience if time allows.

REMARKS

9. Nil.

National Defence | Défense nationale

A-CR-CCP-951/PT-002

ROYAL CANADIAN ARMY CADETS

ADVENTURE TRAINING SAFETY STANDARDS

(ENGLISH)

Cette publication est disponible en français sous le numéro A-CR-CCP-951/PT-003.

Issued on Authority of the Chief of the Defence Staff

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A-CR-CCP-951/PT-002

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Issued on Authority of the Chief of the Defence Staff

OPI: D Cdts 3 – Senior Staff Officer Youth Programs Development

2005-11-17
Ch 2 – 2008-11-04

Canada

LIST OF EFFECTIVE PAGES

Insert latest changed pages and dispose of superseded pages in accordance with applicable orders.

NOTE

The portion of the text affected by the latest change is indicated by a black vertical line in the margin of the page. Changes to illustrations are indicated by miniature pointing hands or black vertical lines.

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11A-4	1
11A-5 to 11A-7/11A-8	0
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11C-1/11C-2	2
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11F-1/11F-2	0
11G-1/11G-2	0
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Contact Officer: D Cdts 3-2-5 – Staff Officer Army Cadet Program Development

FOREWORD

1. A-CR-CCP-951/PT-002, Royal Canadian Army Cadets – Adventure Training Safety Standards, is issued on the authority of the Chief of the Defence Staff and it is to be first implemented during the year of 2003.

2. This publication was developed by Director of Program Development (D Cdts 3) in accordance with Canadian Forces regulations and related civilian agencies.

3. This publication is the authority for the conduct, supervision, support and qualification requirements of related Royal Canadian Army Cadets (RCAC) adventure training activity.

4. All other activities wanting to be practiced and not appearing in this publication will have to obtain the Detachment/Region or the Directorate of Cadets authorization.

5. Suggestions for changes will be forwarded to National Defence Headquarters (NDHQ), Attention: D Cdts 3-2-5 – Staff Officer Army Cadet Program Development or by Email to arm.dev@cadets.gc.ca. ▮

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CHAPTER 1

INTRODUCTION

DESCRIPTION

1. This document results from the efforts of the various Army Cadet Program Review Boards convened since 1998. The nature and sequence of these activities were developed IAW CATO 40-01, Army Cadet Program Outline, and in compliance with the development and safety standards of the Canadian Forces and national/international agencies, according to their area of specialization.

AIM

2. The aim of this publication is to provide comprehensive industry based safety standards to guide and govern the training, resource requirements, progression conduct and structure of adventure training activities conducted by Region Cadet Support Units (RCSUs) and Cadet Corps.

USING THIS PUBLICATION

3. The level at which the activities described in this publication are conducted is immaterial; the fact remains that the people in charge are **required** to abide by the safety standards and guidelines governing each of these activities.

4. Although camping activities are not addressed in this document, they form an integral part of all the other activities described. For information on the general skills and knowledge required for camping activities, refer to PO X21 of the Star Level Program. For reasons relating to safety and supervision, it is recommended that participants possess basic knowledge and skills relating to “adventure training” before combining this element with any other activity. Moreover, supervisors at all levels shall stress the importance of practicing minimum impact camping and of leaving no trace of one’s passage. Remember that you are a guest in someone else’s house! Respect private property, homes and the need for peace and quiet of other site users.

AUTHORIZATION

5. As stipulated at CATO 40-01, Army Cadet Program Outline, advance authorization must be obtained from the proper authorities.

SAFETY

6. **Instructor-Cadet Ratio.** CATO 13-12, Supervision of Cadets, outlines the minimum supervision ratio for cadets participating in training. However, in the interest of safety, adventure activities will often require a greater ratio of instructors (X) to cadets (Y), expressed throughout this publication as X:Y. These published ratios govern the cadets taking part in the specified activity, e.g. in the case of climbing, the ratio of 1:2 includes only those cadets actually participating in the climb, the supervision ratio in CATO 13-12 shall govern any cadets who may be waiting in a group for their turn to climb. When a person (CF member, civilian, or cadet) has suitable requisite training offered by an internationally, nationally, or provincially recognized civilian service provider and/or suitable experience, the RCSU CO may, following a review by the Region Expedition Officer of the individuals skills and qualifications, appoint the person as an instructor for the purposes of meeting the supervision ratios specified in this publication.

7. **Inherent Risks of Adventure Activities. The concept of risk is essential in the conduct of adventure activities**. First of all, there must be awareness that the failure to conduct a risk assessment constitutes pure and simple irresponsibility. It should also be understood, however, that if there is no risk or danger then the activity can no longer be termed an adventure activity. Consequently, our task is to strike a

balance between risk levels and safety levels for a given activity. As noted earlier, an activity will be deemed dangerous if there is a failure to implement all appropriate procedures to mitigate the risk. We are referring here to sound individual judgement, proper mental and physical preparation, requisite skills and qualifications, planning, and the use of good equipment. Although we cannot guarantee that no accidents will occur, through a proper assessment of the risks involved we can certainly reduce the frequency, impact and seriousness of any injuries or accidents that may occur.

8. We should point out here that the Canadian Forces practice risk assessment and management and in partnership with the Army Cadet League of Canada provide protection insurance covering individuals involved in all **authorized** activities.

9. Our safety standards were developed in harmony with the policies of civilian and military agencies. It is imperative, therefore, that these safety standards be respected and applied; otherwise, the Canadian Forces and the Army Cadet League of Canada will be unable to assume and accept responsibility should an accident/incident occur. Such a case would constitute negligence and the individual alone would be accountable.

9A. **Accident Investigation and Reporting.** In the case of an accident while undertaking adventure training, accident and investigation procedures shall be followed in accordance with A-GG-040-001/AG-001, DND General Safety Program, Volume 1.

10. **Introduction of the Activity and Briefing of Participants.** Operation Orders detail the overall structure, objectives, numbers of participants, personnel, requisite equipment, start and finish and site of the activity, as well as the planning schedule up to submission of the end-of-activity report. Once this is complete and the personnel have been selected, the following elements must be addressed:

a. information session for participants;

b. pre-training (where necessary);

c. personnel;

d. equipment check;

e. check and assessment of facilities;

f. reservation of site(s) (signing of contract or letter of understanding);

g. review of policies and procedures;

h. emergency plan;

i. prerequisites (medical, age, physical fitness, qualifications, experiences, etc.);

j. medical statement form (Annex A); and

k. consent and risk awareness form (Annex B).

11. Of course, the parents must be informed as early as possible in the process, particularly if the activity falls outside the cadet corps' established schedule. Once the additional training (where required) and preparations are complete, the activity leader should reiterate the goals of the activity and the details surrounding the prerequisites.

12. On the day of the activity and at the start of each session, the participants should be briefed on the structure of the activity and the relevant safety procedures. On completion of the briefing, we recommend that the following elements be covered before commencing the activity itself:

a. list the learning objectives;

b. note the objectives to be achieved;

c. stimulate interest and discussion by using metaphors applicable either to the activity itself or its objectives;

d. teach/outline the necessary skills;

e. warm up; and

f. stage some activities to encourage teamwork.

13. Once the activity is complete, the activity leader should seek feedback from the participants. Through discussion, the leader should highlight the key aspects of the activity. Firstly, the leader should ensure that the participants are capable of defining the various elements learned during the activity and, secondly, the leader should identify means by which their new skills might be applied to other situations in their daily lives.

14. **Information for Parents.** Joining instructions (Annex C) and authorization forms should be provided for every activity involving cadet participation. The instructions should cover the following points:

a. description of activity;

b. contents and inherent risks of the activity;

c. contact for parents;

d. contacting the parents;

e. medical statement form (Annex A); and

f. consent and risk awareness form (Annex B).

POST-ACTIVITY

15. Once the activity has been completed, every aspect should be reviewed. This will involve a re-assessment of the ratio, the number of participants and their prerequisites, the duration and timing of the activity, the number of instructors and their qualifications, the equipment, the site, the facilities, the safety procedures (emergency plan), the preliminary planning, etc. Each element should therefore undergo a separate review aimed at improving the activity on the next occasion. A logbook can be kept for both instructors and participants and used to compile information concerning the activity and the learning/experiences of the participants.

16. Before placing the equipment in storage, an inspection and evaluation should be carried out to ensure the maintenance, repair or replacement of obsolete/damaged equipment. Care should also be taken to ensure that the equipment storage area is adequate and capable of preventing damage to the equipment until the next time it is used.

ANNEX A

MEDICAL INFORMATION

Section A – Medical Condition		
Yes	**No**	
		1. Has your doctor ever told you that you have a heart problem **and** that you should only take part in physical activities prescribed and approved by a medical doctor?
		2. Do you ever experience chest pain while engaging in physical activity?
		3. In the past month, have you ever experienced chest pain at times when not engaging in a physical activity?
		4. Do you ever experience balance problems associated with dizziness or have you ever lost consciousness?
		5. Do you have bone or joint problems that may be aggravated by a change in your level of participation in a physical activity?
		6. Are you currently being prescribed medication to control your blood pressure or a heart problem (e.g. diuretics)?
		7. Are you aware of any **other reasons** why you should not engage in physical activity?
Section B – Are You Suffering From or Have You Ever Suffered From		
Yes	**No**	
		Epilepsy
		Hemophilia
		Psychiatric problems
		Serious allergies (e.g. nuts, peanuts, stinging insects, hypersensitivity to cold)
		Asthma
		Diabetes
Section C – General		
Yes	**No**	
		Are you pregnant?
		Have you undergone surgery during the past 10 months?
		Are you currently taking any medication(s)? If so, please indicate:
		Do you have any dietary restrictions? If so, please indicate:
		Do you have any physical restrictions that would affect your participation in the entirety of adventure training? If so, please indicate:

Section D – Participant Statement	
Please read carefully and initial each paragraph.	**Initials**
I hereby declare that I am not under the influence of alcohol or any drug, and I formally pledge to refrain from using drugs or alcohol during the activity.	
I hereby declare that I have read, understood and agreed to the provisions in this document and that all the information contained herein is true. Signature _____ Date _____ Year _____ Name of Parent or Tutor _____ Signature of Parent or Tutor _____ (Required for participant under 18 years of age)	

Figure 1A-1 Medical Information Form

ANNEX B

CONSENT TO ADVENTURE TRAINING

Cadet ID Information	
Name of Cadet:	First Name:
Telephone No.:	Emergency Telephone No.:
Provincial Health Insurance No.:	Expiry Date:

Name of Activity:	Activity Leader:
Location of Activity:	Dates of Activity:
Purpose of Activity:	
Details of Activity:	

Parental Consent (please read carefully)	
Name of Parent:	First Name:
I consent to the participation of my son/daughter or pupil in the requested cadet activity (activities). I am aware that the activity (activities) in which my son/daughter or pupil plans to participate is (are) dangerous and may result in a loss of limbs, injuries and/or trauma.	
I hereby declare that I have understood each of the provisions of this agreement. Parent Signature _____ Date _____	

Participant Statement (please read carefully and initial each paragraph)	
	Initials
The activity leader has explained, illustrated and demonstrated to me **to my satisfaction** the nature, risks and dangers of this activity and I accept these risks.	
I am aware that the activity in which I plan to participate is dangerous and may result in the loss of limbs, injury and/or trauma.	
I pledge to abide by **all the directives and instructions** issued by the activity leader, his/her guides, monitors or other officials.	
I hereby declare that I have understood each of the provisions of this agreement. Cadet Signature _____ Date _____	

Commander Signature _____ Date _____

Note: Before signing, the commander must ensure that the expedition has been well planned and that the leader possesses the necessary qualifications.

Figure 1B-1 Consent to Adventure Training Form

ANNEX C

JOINING INSTRUCTIONS

1. The following elements should be covered:

   a. Name of activity.

   b. Description of activity.

   c. Purpose of activity.

   d. Place and time of departure.

   e. Place and time of arrival.

   f. Location of activity.

   g. Dates of activity.

   h. Activity leader.

   i. Number of participants.

   j. Equipment required and equipment supplied.

   k. Transportation.

   l. Rations.

   m. Contact telephone number.

   n. Etc.

CHAPTER 2

PHILOSOPHY AND APPLICATION CONCEPTS – EXPERIENTIAL EDUCATION

GENERAL

1. Experiential education has been identified as a principal tool to be used in the accomplishment of both RCAC training and adventure training. Experiential learning is "learning by doing" in opposition to learning theory in the classroom. The Association of Experiential Education (AEE) based in Boulder, Colorado defines experiential education as "a process through which a learner constructs knowledge, skill, and value from direct experience". This does not mean that experiential learning cannot take place in the classroom, but learning experiences are designed to be experiential wherever they take place.

DEFINITIONS

1A. **Experiential Learning (Itin, 1999).** The change in an individual that results from reflection on a direct experience and results in new abstractions and applications. Experiential learning rests within the student and does not necessarily require a teacher.

1B. **Experiential Education (Itin, 1999).** A holistic philosophy, where carefully chosen experiences supported by reflection, critical analysis, and synthesis, are structured to require the learner to take initiative, make decisions, and be accountable for the results, through actively posing questions, investigating, experimenting, being curious, solving problems, assuming responsibility, being creative, constructing meaning, and integrating previously developed knowledge. Learners are engaged intellectually, emotionally, socially, politically, spiritually, and physically in an uncertain environment where the learner may experience success, failure, adventure, and risk taking. The learning usually involves interaction between learners, learner and educator, and learner and environment. It challenges the learner to explore issues and values, relationship, diversity, inclusion, and community. The educator's primary roles include selecting suitable experiences, posing problems, setting boundaries, supporting learners, insuring physical and emotional safety, facilitating the learning process, guiding reflection, and providing the necessary information. The results of the learning form the basis of future experience and learning.

CONCEPTS

2. Experiential learning was initially regarded as lacking a solid base of theory, relying on the perception of its benefits instead of empirical research for popularity. Since the 1960's, education and psychology professionals have dedicated considerable resources to document and develop experiential education principles so that it could meet stringent structure and validation requirements. Since the early 1980's, school boards in the United States and personal development organization such as Outward Bounds International, Project Adventure, National Outdoor Leadership School and the Wilderness Education Association have used experiential education to the point that it is now the preferred method of delivering outdoor education.

3. Experiential education's foundation is based in Dewey's view that learning is an active process and the classroom is a complex interactive environment (1929 and 1938); Hahn's Outward Bounds principles (1934); Piaget's Theory of Cognitive Development (1951), Maslow's Hierarchy of Needs (1954); Bruner's Discovery Learning (1960); Gardner's Multiple Intelligence (1983); Kovalik's (1997) Integrated Thematic Instruction and brain research. In a more modern sense, there are hundreds of authors presently publishing information on experiential education. The Journal of Experiential Education is published three times per year by AEE. The following authors have made significant contributions to experiential education and have developed practical tools to enhance education delivery.

4. The experiential learning cycle was developed to help visualize the necessary steps for it's application (Kolb, mid 1980's):

a. cadets **experience** a specific activity;

b. the experience leads to **reflection**;

c. results of the reflection lead the cadet to make **generalizations**; and

d. generalizations are **applied** in future experiences.

5. Joplin (1981) identified eight characteristics to experiential education:

a. the experience is cadet based;

b. the environment is of a personal nature;

c. the learning is process and product oriented;

d. the evaluation exists both for internal and external reasons;

e. the understanding of the learned material is to be holistic and analytical;

f. the learning is organized around experience;

g. the knowledge is acquired by how the learner perceives it instead of being solely theory based; and

h. the learning is individually based.

6. In order to help instructors design learning that is experiential, Joplin (1981) developed a five-stage model that describes an educational experience. The first stage of the model is FOCUS, where the subject is defined, attention is grabbed, expectations are explained and safety parameters are set. The ACTION stage is a stressful or challenging experience that forces the learner to act or react. The action may be physical, mental, emotional or spiritual. The experience must be active, usually when educators think of experiential education, they think in terms of ropes courses, hiking or paddling expedition and team-building games. Reading an article for example is not mentally active unless the information from the reading must be used for something else, reading itself does not usually lead to a stressful or challenging experience. SUPPORT and FEEDBACK are the third and fourth stage of experiential education. In these stages, the learner is encouraged to continue the quest, persevere, and receive feedback on his or her performance. Support and feedback allow the learner to assess the situation as it evolves and develops. The last stage of an experiential learning opportunity is DEBRIEF. At this stage, the learning is recognized, organized and articulated. The debrief also allows for an evaluation of the learning and a synthesis of the experience so the participants learn from their experience. Often, a debrief leads to FOCUS for the next activity.

7. Experiential education is appropriate for use in the delivery of the Army Cadet Program since it inherently fosters many of the RCAC training objectives. These training objectives are activity based and include a significant component in the development of the “self-concepts” and personal growth (i.e. produce leaders, develop instructional and leadership skills, develop self-discipline, protect and preserve the environment, participate in community activities, develop a high level of physical fitness and promote sensible community living habits).

8. In the pursuit of the aim “to encouraging personal growth”, there must be a certain amount of learning (or transfer) that needs to take place; from the physically and mentally challenging training activities to an internalization of lessons learned. Without specific learning goals, the challenging activities are fun but may not contribute to the many other objectives of the RCAC training program IAW CATO 40-01. The training objectives of the RCAC are to learn skills or knowledge. Learning does not preclude the opportunity to have fun but it enhances it to meet the other important training objectives.

9. Gass (1995) explains that one of the ways of looking at learning especially using the experiential approach is “how will it serve the person in the future”. It’s easy to see how learning a specific skill will lead to a better performance during a similar activity in the future but how will help a person grow?

10. Adventure activities lend themselves to experiential learning where participants learn by doing; e.g. abseilers can learn to conquer their own fears and to trust safety equipment/procedures during abseiling. But what else can they learn from the activity? You can learn the skill of abseiling itself so that it is done better or more efficient the next time, hence it will serve the person in the future but what about the training objectives of the RCAC? This is where a facilitation approach to leadership can be used to help participants transfer the experience into a learning opportunity of broader scope. It may not be obvious to teenagers how conquering their own fear of heights develops self-discipline, furthermore, it may not be obvious to see how self-discipline developed on a rock face transfers to self-discipline as a youth leader at the cadet corps.

11. In addition, experiences can be used to sensitize people to certain issues, in the example above, the environment in which abseiling takes place can be used to develop an appreciation for the natural wilderness of Canada. By exposing Canadian Cadet Movement (CCM) members to the natural beauty of the environment, they can become personally motivated to protect and preserve the environment. Often, the facilitator role is just one of the leadership roles in the development of cadets. Facilitation often takes place in informal teaching. This is not to say that its not planned or organized. In order to be most effective, every learning opportunity should be planned, presented and confirmed. Facilitation of learning in adventure training is often not structured in a basic lesson plan such as the ones commonly used in the military environment.

12. One fundamental aspects of experiential education is the transfer of learning (refer to paragraphs 5.e., g. and h.). Bruner (1960) theorized on the transfer of learning and his conclusions are seen in the first example where doing one skill will teach the person to do it better the next time, this is called specific transfer (habits and skills). Accordingly, non-specific transfer applies for example where self-confidence developed while abseiling carries over to self-confidence in dealing with junior cadets.

13. Bacon (1986) describes one method of non-specific transfer with his theory of metaphoric transfer as it applies to concepts of “similar principles”. In the abseiling example, the participant can use the skill of abseiling as a metaphor for learning other things. In this case: The “abseil” rope can be the cadet’s own personality, her own direction, her likes and dislikes; the belay rope can represents her circle of friends, present for support in case there is a problem in the abseil rope; the harness can be her family, attaching the cadet to her personality and her circle of friends. The cadet can than use this metaphor to learn that her surroundings will support her if needed but she remains the driving force behind the movement, she must walk off the cliff herself. This metaphor could be used to help a teenager make decisions about a specific direction in life, choosing a progression in school or at cadets.

14. Canoeing can be used for another example of metaphoric transfer. Cadets that learn to paddle canoes know that each person must put enough effort to do their own share of the work and that paddling in unison is more effective than paddling at an independent rhythm from your partner. These two basic principles can apply to other situations; e.g. Non-Commissioned Officers (NCOs) at cadet corps need to do their own share of the work (get the recruits ready for parade, fill out the parade states, prepare classrooms) and the work they do is more fruitful when coordinated with everything else going on that evening (NCO must get the platoons ready for parade because the Company Sergeant-Major (CSM) is busy preparing a lesson, but when the CSM is ready, the parade can take place without delays).

METHODS

15. So how do we help a person learn; develop skills and knowledge that will enhance their performance in the future, both specific and non-specific transfers? Many methods of transferring learning exist and no one facilitator is expected to know them all. Good leaders however learn a few methods in order to help them achieve their goals – which often involves “influencing human behaviour”. Gass (1995) list the following techniques used to facilitate the transfer of learning in adventure activities:

a. Design conditions for transfer before the course or learning activity begins:

   (1) identify group or class goals;

   (2) have the participants set personal goals; and

   (3) write learning objectives.

b. Create elements in the learning environment similar to those elements in other environment or situations (e.g. metaphors).

c. Have the cadet practice the transfer of learning while still in the program, don’t expect participants to learn at the end of an activity and apply their new skill or knowledge in a difficult situation.

d. Use natural consequences of learning in order to reinforce concepts.

e. Provide an opportunity for the participants to internalize their own learning:

   (1) ask questions that will make the cadets assess their own reactions and feeling about the activity;

   (2) use reviewing or debriefing methods to guide the cadets to ask themselves those questions;

   (3) include past successful candidates in the adventure activity or program;

(4) include significant others in the learning process (peers); and

(5) once cadets can function in this environment, increase their responsibility for learning.

f. Provide follow-up experiences that aid in the application of transfer (progression of training, use last year's successful candidates to help develop this year's class; use debriefing and reflective tools such as logbooks).

16. So why are cadets participating in adventure activities? To learn, advance, develop, to challenge themselves, to grow… to precipitate a change... The AEE (1996) cites its organizational belief that "Changes in behaviour, attitudes and perceptions as a result of a life experience; may not always be automatic. In order for experiential learning to take place, there must be synthesis and reflection". These processes will enhance the internalization of change for the cadets and will result in some change of behaviour – sometimes with varying degrees of success. Some examples of synthesis and reflection methods are logbooks and journals; debriefs and reviews. Those tools are discussed below.

DEBRIEFING METHOD

17. **Debriefing the Experience.** Our role in using the debriefing method is to guide participants through a process of introspection that will help them discover by themselves what they have learned. Our job is to lead them through this learning process by asking the proper questions and avoiding any reference to what we might think they have learned. Such an approach will encourage participants to share their personal experiences.

18. **Concept.** The concept is to lead the participants, through a series of steps, to an understanding of how beneficial this learning and experience can be to their daily lives. Even before starting the actual debriefing, the leaders should take written or mental notes describing the reactions of the participants, their behaviour in the company of their peers and the incidents which occurred during the activity. These observations should be linked to the established objectives and may refer specifically to teamwork, communication, problem-solving, initiative, self-confidence, etc. Some authors (Priest and Gass) refer to the funnel approach when advocating the use of real experiences to encourage changes in behaviour. The sequence proposed by Greenaway underscores the use of actual experience to make participants aware of the knowledge and learning they have acquired in preparation for another experience.

19. The main idea that emerges from the two works cited at the reference concerns the importance of the participants' actual experiences and their newly acquired understanding that acquired knowledge and learning can bring about changes in behaviour.

20. **Stages.** The first stage involves conducting an overview of the activity, including the established objectives, the needs or interests of the participants and any problems/incidents that might have arisen. Of course, we ask the participants to review the activity for us and give us an assessment, i.e. a performance rating. This stage can be summed up as follows: what happened?

21. The second stage involves asking the participants to comment on what they went through and how they handled their experiences. Participants should refer to specific moments when the activity went well or did not go well. This stage can be summed up as follows: how do you feel about your experiences?

22. The third stage focuses more on their emotions and the origins of those emotions. Thus, we ask the participants to detach themselves emotionally from what they experienced and analyze their conduct. They should identify the particular elements or situation that influenced their behaviour/reactions. Why did they react in one way rather than another? What impact did their behaviour/reaction have on the group? It is essential that the individuals focus on situations and behaviours rather than on the individuals themselves, since behaviour is a means used by a person to adapt to a situation. The question being asked here is: what emotions did you feel?

23. During the fourth stage, the participants will be asked to identify what they themselves have learned and how it can be related to their everyday lives. To facilitate this transfer, it is recommended that activity leaders use metaphors and analogies. We can sum up this step by asking: what links or parallels with your daily lives can you identify?

24. The final stage involves asking the participants how they would conduct the activity differently and why. Or maybe asking how they might react differently to a particular situation in their daily lives and why.

25. To ensure that this learning and transfer process proceeds smoothly, we recommend that the participants and activity leaders keep a logbook. The benefits and procedures associated with this logbook are described below.

PERSONAL REFLECTION

26. An activity logbook offers a special opportunity for learning. In a logbook or journal, the participant states certain facts about their experience, performance, expectations and lessons learned. The process of organizing one's thought, or "dumping" information and feelings about certain activities can lead to reflection and discussions. For the purpose of this instruction, logbooks will be factual and detailed. Journals will be similar but will also include personal reflections as the result of an activity. Logbooks and journals may be reviewed by the appropriate staff to monitor the development of the cadets under their charge and assess activities. In this situation, logbooks and journals can be used to communicate between participants and leaders especially if the cadets feel uncomfortable asking certain questions out loud.

27. Usually, the more complete the journal, the more useful it is to the cadet and the staff. The following items may be included in logbooks and journals:

a. group contracts;

b. list of expectations;

c. short-term and long-term goals;

d. personal and group goals;

e. topic of the day/week or activity;

f. personal feelings;

g. self-assessment;

h. list of resources;

i. mentors and how they influence the cadet;

j. successful personal habits in other people;

k. stories, pictures and songs;

l. lessons learned; and

m. notes to self and to reviewers.

28. As a side effect of the learning process, logbooks and journals become invaluable assets in reliving memories weeks, months and years after the event. There are different types of logbooks, listed below are a few examples:

a. personal journals/logbook;

b. section/platoon or team logbooks;

c. logbook review/sharing logbooks;

d. activity leader logbook; and

e. safety/usage logbook (e.g. ropes log, range log).

ANNEX A

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CHAPTER 3

CANOEING – KAYAKING – VOYAGEUR CANOEING – SEA KAYAKING

GENERAL

1. This chapter is written in five sections. The general portion applies to the four paddling activities identified in the subject. The subsequent sections contain details specific to each activity.

DESCRIPTION OF ACTIVITY

2. The paddling sports come from the locomotion generated by paddlers in a small watercraft. Many different types of crafts exist and will be discussed in the instruction; canoes, and kayaks are in the same family of transportation/leisure vehicles and activity origin. Small watercraft such as canoes differ by their shapes and purposes. A very different shape and construction is used for a long distance travelling voyageur canoe compared to an Olympic sprint canoe or a sea going kayaking to a small very manoeuvrable kayak made for moving water.

3. In this order, the term “paddlers” refers to all operators of canoes, kayaks, sea kayaks and voyageur canoes. When specific directives apply to only one or some of the paddling activities, they will be identified. Rafting, as an adventure activity will be covered separately. When sea kayaking is not specifically identified, the term “kayak” or “kayaking” refers to the smaller, plastic kayak usually used in moving water, rivers, and creeks.

AIM OF ACTIVITY

4. The aim of paddling activities such as canoe/kayak training is to expose CCM members to an activity of great cultural significance to Canadians. Water travel in Canada is part of our heritage. The CCM offers an exciting way for cadets to explore Canada’s waterways through the promotion of safe canoeing and environmentally sensitive paddling. The discovery of Canadian geography can be used to challenge cadets and expose them to environments/situations with which they may not be familiar. Paddling instruction and trips can offer an opportunity to appreciate the Canadian wilderness and for cadets to learn from their experience. Paddling does not by itself build on other skills already learned in the CCM, although cadets who have experienced backpacking and expeditions using other modes of travel will have a better understanding of the principles behind on-water trips. Each paddling activity develops new specific technical skills. Paddling skills can easily be combined with other adventure activities, in addition to map and compass, citizenship, leadership development and instructional technique. Moreover, CCM members will learn water safety and safe tripping skills.

CANADIAN REGULATIONS CONCERNING SPECIFIC ACTIVITIES

5. The Canadian Coast Guard regulates the use of small watercraft such as canoes in Canada’s waters. The Small Vessel Regulations describe the minimum safety equipment required for all recreational vessels, including canoes, kayaks and voyageur canoes. Voyageur canoes depending on their length come under different categories of craft then ordinary canoes and kayaks. In addition, the Collision Regulations apply to every vessel operating in navigable waters. They dictate right-of-way rules and require the operator of every vessel to maintain a constant look-out. Paddlers are required to use every available means to determine whether there is any risk of collision with another vessel. Although bumping commonly occurs during training in small watercraft, collision in this case means a collision that results in harm/destabilization of paddler(s) and/or damage to craft.

6. The Canadian Fisheries and Environment Ministry may restrict access to certain waterways; the CCM will abide those regulations.

MILITARY REGULATIONS

7. The CF regulates Adventure Training in DAOD 5031-10 and Aquatic and Water Safety in CFAO 50-04.

CCM SAFETY REGULATIONS

8. Many aspects of paddling safety specific to the CCM are covered in A-CR-CCP-030/PT-001, Water Safety Orders. In case of disagreeing instructions between A-CR-CCP-030/PT-001, DAOD 5031-10 and CFAO 50-04, Aquatic and Water Safety, A-CR-CCP-030/PT-001 shall be the primary source of correct information for watercraft safety in the CCM.

AUTHORITY LEVEL

9. Flat water/moving water trips and day instruction require prior approval by Regional Cadet Support Units Detachments Commander's. Wilderness trips, big water paddling and group sizes larger than 20 members require Regional Cadet Support Unit Commanding Officer's approval.

10. Paddling expeditions that involve groups larger than 50 members should be avoided since they can severely impact the environment in which they are conducted. However such expedition and multi-regional initiatives, or in extreme conditions such as polar regions or UNESCO World Heritage Sites require National authority.

GOVERNING BODIES

11. Governing bodies are:

a. Paddle Canada
P.O. Box 398
446 Main St West
Merrickville, ON K0G 1N0
Telephone: 613-269-2910
Fax: 613-269-2908
Toll Free: 1-888-252-6292

b. Canadian Canoe Association; the professional body of top level paddling athletes responsible for national coaching and athlete carding; National Canoe team for world competitions and Olympics (www.canoekayak.ca).

c. International Canoe Association.

d. American Canoe Association
7432 Alban Station Blvd, Suite B-232
Springfield VA 22150
Telephone: 703-451-0141
Website: www.acanet.org

e. Canadian Red Cross Water Safety Service.

f. White Water Canada.

g. Rescue 3 International.

h. National Life Saving Society.

i. Parks Canada, National Rivers Project.

j. Paddling links at: canoe.info-pages.com/dbase-new/club-c.html.

12. Provincial and regional organization are:

a. Provincial affiliates of Paddle Canada (Annex A).

b. Ontario Marathon Canoe Association.

c. Fédération québécoise de canot-kayak camping
1415 Jarry Est
Montréal, QC H2E 2Z7

EQUIPMENT REQUIREMENTS

13. A-CR-CCP-030/PT-001, Water Safety Orders, outlines the requisite safety equipment to be provided in each canoe/kayak.

a. D E L E T E D

b. D E L E T E D

c. D E L E T E D

d. D E L E T E D

e. D E L E T E D

f. D E L E T E D

14. IAW A-CR-CCP-030/PT-001, Water Safety Orders, Annexes D and E, certain articles of equipment and clothing are appropriate, recommended or necessary for undergoing paddling training. The following clothing and equipment is added as a requirement to conduct paddling training in the CCM:

a. **Equipment**

(1) **Watercraft.** All crafts used by cadets for paddling sports will be inherently buoyant. If buoyancy can only be established with air cells, they must be checked for effective performance regularly.

(2) **Helmets.** A regionally approved helmet is recommended for wear at all times, but mandatory when operating beyond Class I river conditions or near rock on open water. Personnel undergoing kayak training will usually wear helmets at all times. Helmets must be made of a sturdy shell and cushion lining with many water exit holes (vented) and a solid chinstrap. The helmet must be worn secured to the head, not swivelling side to side or back and forth, it must protect the frontal lobe from impact and the cervical spine from back swing. Some model of specific paddling helmets such as “Wildwater” and “Cascade” may also be utilized as long as they are fitted properly. Ear guards are not required but recommended in moving water above Class II.

(3) **Paddles.** Not every canoe/kayak training facility has the financial ability to purchase and maintain modern aluminum/plastic or graphite composite paddles. If relatively inexpensive wooden paddles must be used, they should be in good condition, and properly varnished. They should also be readily available in large quantities since they are easily broken.

(4) **First Aid Kit.** A waterproof first aid kit of appropriate size and type for the paddling group and the activities is expected; it must be readily available during training and tripping.

(5) **Repair Kit.** An appropriate repair kit for the number and types of craft must be taken on trips and should be available during training.

b. **Clothing**

(1) **Layers.** Should be warm and wind/water resistant according to weather.

(2) **Shoes.** Must be worn at all times. Soft-sole lightweight running shoes or wet-suit booties with good soles are preferable especially if portages are expected. Sturdy sports sandals with solid buckles are acceptable for flat water paddling activities or when difficult portages are not expected. Loose Velcro attachments tend to let go once wet, and therefore are not acceptable.

(3) **PFDs.** Must always be worn and worn as the last layer. An inspection must take place to ensure that the clothing required according to weather and temperature does not interfere with the buoyancy of the participants. Wet and dry suits offer good performance and enhance buoyancy in cold weather/water conditions. Efforts should be made to make this equipment available if necessary.

15. Inappropriate clothing:

a. big rubber boots “farmer style” and combat boots;

b. flip-flops, clog type footwear or loose shoes/sandals; and

c. restrictive clothing or clothing that will become restrictive once submerged under water, e.g. many layers of wool, jeans or clothing with elastics that will retain water.

RECOMMENDED EQUIPMENT LIST

16. The following list of equipment should be made available to cadets undergoing paddling training:

a. knee pads;

b. wide brim hat;

c. gloves or pogies;

d. appropriate weather clothes, i.e. wind and water protection; and

e. wet or dry suits are strongly recommended for paddling in conditions of water temperature colder than 10°C.

SAFETY BOAT REQUIREMENTS

17. Safety boat requirements are identified in A-CR-CCP-030/PT-001, Water Safety Orders.

RATION REQUIREMENTS

18. **Type.** While canoe/kayak training or tripping, no special nutrition is required with the exception of fluids. Paddling can be a very physically demanding activity and usually take place with no protection from the sun and wind. Plenty of appropriate fluids (cold or warm) must be available for all paddlers. The type of rations for paddling trips can be varied and flexible. Since paddlers are not usually over concerned with weight, Individual Meal Pack (IMP) offers an easy meal with plenty of nutrition. If fresh rations are used, proper meal planning is necessary especially for trips longer than three days.

19. **Amount.** The energy cost of paddling is similar to that of hiking, the amounts of rations must cover all meals, snacks, quick energy fixes and a safe surplus (usually one meal for a short trip and three meals for a five-day trip). In cold temperatures the energy cost of paddling may be elevated even thought the paddlers may feel less appetite. Nutritious, sweet and good tasting foods are necessary to sustain long-distance paddling in cold temperature conditions.

20. **Preparation.** If environmental conditions and fire indexes allow; it is possible for cadets on a paddling trip to cook their food over an open fire; however, direct supervision is required. Usually single burner stove will be used for warming water and cooking food. Similar precautions must be taken while cooking over a stove as cooking over an open fire.

21. **Water.** Water and fluids should be readily available during canoe/kayak training. In most Canadian streams, it is now advisable to either filter or purify drinking water. Chemical water purifying methods such as the use of iodine should be mainly used for cases of survival since they have an adverse effect on the body functions and organs. If clean drinking water is not available from the area, then filters/purifiers must be carried and employed. Water can also be boiled for five minutes to be fit for consumption. This method of water purification burns a lot of fuel and proper provisions will have to be carried. However, boiled water is often associated with unpleasant tasting water, cadets may fail to rehydrate properly.

TRANSPORTATION REQUIREMENTS

22. Paddling day instruction and tripping usually requires the transport of canoe or kayak trailers. Drivers must ensure the proper electrical and tow equipment is available in the vehicle towing the trailer. Drivers should be experience at driving with a canoe trailer and must also take responsibility for their load. All watercraft tie-downs (straps) must be double checked by the driver prior to departure.

23. If trailers are left unattended during training or tripping, proper security arrangements must be made to ensure the trailer will not be stolen or tampered with. Special permissions may be required to leave trailers and vehicles overnight.

24. Safety vehicle/evacuation means may be the same vehicle. If no motorized safety boat is used during a paddling trip, then a safety vehicle must be present at a location closely accessible to the trip leader. The safety vehicle must have appropriate communications means to be in contact with both the trip leader and local authorities. A first aid kit should be available in the safety vehicle at all times.

25. In wilderness settings where no land or water safety vehicle is accessible within three hours, proper arrangements must be made for helicopter evacuations through either search and rescue, the CF, parks services, police/fire department or the national coast guard. If this last option is used, proper communications must be established with the evacuation agency. In this case, communications will usually require satellite phone access and a prepared list of the appropriate phone numbers and emergency procedures.

CADET SKILL LEVEL

26. Army cadets at any level of training may participate in flat water paddling training as part of the Corps Program (Complementary Activity), Optional Program, CSTC Program, or CSTC Extra-curricular Activity. Additionally, Army cadets may participate in paddling instruction as Regionally or Nationally Directed Activities.

27. Cadets must be able to control their craft and demonstrate calm response to instructions while swimming in flat water while wearing a PFD prior to progressing to moving water. Also, cadets must have previous experience on Class II water prior to paddling on Class III rapids (refer to Annex D).

28. Although it is understood that paddling trips are often a learning experience where much instruction and practice will take place during the conduct of the trip, some pre-trip training is required. Inherent risks exist in all types of paddling activities. Although training cannot guarantee the complete safety of cadets on paddling trips, it is necessary to conduct the following minimum training prior to departure:

a. For cadets who have never participated in paddling training before, it is necessary to conduct at least two days of flat water training prior to departure. The pre-trip training is to including the basic strokes, the swim test in A-CR-CCP-030/PT-001 and the necessary safety skills listed in the progression table (Annex B).

b. If cadets have received the two-day introduction before, then a one-day review and practice is adequate.

c. If cadets are going to paddle in moving water or open water, then they must receive at least one additional day of training appropriate to the content of the trip. The pre-trip training must include immediate actions upon dumping, basic strokes, swimming, self-rescue and the necessary safety skills as listed in the progression table for the conditions expected on the trip. Also, dangerous conditions such as sweeper/strainer, low head dams and unhappy (frowning) holes or ledges must be discussed as part of pre-trip training if they are expected during the trip.

d. If the cadets have paddling trips or moving water trips experience, than one day of practice is adequate prior to departure.

e. With the exception of steering skills, canoe training and voyageur canoe training can be used interchangeably during the pre-training phase for the preparation of a trip. Specific stern training must take place to ensure both tandem or solo traditional canoes and small group voyageur canoes are steered properly. Usually an experienced senior cadet or qualified staff will steer voyageur canoes.

29. Although canoe training cannot take the place of kayak (sea or river) pre-training (and vice versa), some similarities exist and skills/knowledge can be carried over. If cadets are participating in a canoe/kayak trip with prior experience using another type of craft, then at least one day of pre-training must take place to familiarize the cadets with the appropriate craft. One day on flat water prior to flat water trips, and an additional day of moving water or open water prior to moving/open water trips using the appropriate type of craft. Prior experience in rafting is not sufficient since there are usually very few steering skills developed during such an activity.

PHYSICAL FITNESS

30. There are no physical fitness requirements for paddling in general, especially for familiarization and basic training. However, both cadets and staff should function at a Bronze level of physical fitness for solo canoeing and wilderness moving water-paddling trips. In some situations, some instructors/leaders may be the best leaders for specific paddling activity without meeting the basic guidelines for physical fitness. In such a case where a great deal of experience, qualification and ability is demonstrated, the physical fitness requirement should be considered a guideline.

PROGRESSION MATRIX

31. Refer to the progression matrix at Annex B.

INSTRUCTOR TO CADET RATIOS

32. The instructor/cadet ratio for canœing, kayaking and sea kayaking activities are outlined in A-CR-CCP-030/PT-001, Water Safety Orders.

a. D E L E T E D

b. D E L E T E D

33. The instructor/cadet ratio for voyageur canoeing activities shall be as follows:

a. **Flat Water Training.** An instructor to cadet ratio of 1:15 with a maximum instructor to voyageur canoe ratio of 1:4.

b. **Tripping.** An instructor to cadet ratio of 1:8; there must be at least a basic level instructor in each voyageur canoe.

MAX AND MIN NUMBER OF PARTICIPANTS

34. Since safety and rescues are often accomplished with teamwork, there must be a minimum number of craft on the water to ensure the safety of all paddlers.

a. D E L E T E D

b. D E L E T E D

34A The maximum and minimum number of participants for canoeing, kayaking and sea kayaking activities are outlined in A-CR-CCP-030/PT-001, Water Safety Orders.

34B Where voyageur canoes are in use during training sessions there must be at least two craft on the water at all times. Where voyageur canoes are in use during paddling trips there must be a minimum of three craft of a similar capacity in a group. Safety boat requirements for voyageur canoes are found in Chapter 3, paragraph 71.

MANAGEMENT GUIDELINES

35. **Group Organization and Leadership for Paddling Trips.** An instructor or trip leader cannot also be the only supervisor. Certain conditions, such as moving, big or open water conditions, require a minimum of two safety boats each with a qualified instructor on board.

a. Responsibilities of the lead craft are:

(1) set pace and keep track of group;

(2) select route to be followed;

(3) scouts rapids; and

(4) act as rescue boat if required (coordinate with power safety boat and sweep canoe), carry safety equipment.

b. Responsibilities of the sweep craft are:

(1) keeps group intact; and

(2) may act as rescue boat and carry other safety equipment.

c. Group responsibilities:

(1) keep group compact;

(2) maintain sufficient spacing to avoid collisions (usually three to five canoe lengths);

(3) keep next canoe upstream in sight, signal to front canoe to stop if not;

(4) communication between the crafts must carry up and downstream;

(5) give the right of way to the downstream craft; and

(6) judge difficulty according to experience and training.

36. **Rescues.** Instructors and rescue boat operator must be trained in rescues. All paddlers must be trained in basic rescues so that they may help themselves in an emergency. Also, it is beneficial to develop a team approach to rescues and instruct team rescues to paddling groups.

a. The priority of rescue must always be:

(1) people;

(2) boats; and

(3) equipment.

b. Group responsibilities in a rescue:

(1) alert other paddlers of victims in the water;

(2) swimmer are to initiate self-rescue, accept assistance;

(3) other paddlers are to assist in a rescue to the best of their abilities when it is safe to do so; and

(4) all paddlers not involved in the rescue are to pull-over to one side of river when it is safe to do so, walk back upstream if necessary, and wait for further instruction.

37. **Moving Water Safety.** When attempting a set of rapids or training at a set of rapids, it is necessary to establish both upstream and downstream safety. While upstream safety is important for other river users coming into a training area, downstream safety is important for the participants of the training. In addition to the guidelines below, it is recommended to deploy multiple downstream safety alternatives:

a. Take the time to scout the rapids as necessary.

b. It may be necessary for safety personnel to walk down below the rapids to provide safety for the first canoe.

c. It may be necessary to portage a canoe downstream if shore safety is not adequate for the conditions.

d. The first boat down shall become the safety boat.

e. It may be necessary to re-arrange paddlers and instructors within the group depending on conditions.

f. Cadets should be given the option to attempt rapids or to portage around them.

REQUIRED PREPARATORY WORK

38. **Familiarity With Area and Recces.** At least one instructor, usually the trip leader should have training/tripping experience of the area prior to conducting cadet training/tripping. If paddling experience is not available, extensive specific recces of the following points must be done prior to the trip. Written information, the Internet and local knowledge can be used to prepare for the trip. Map recces are a component of the preparation of a trip, but cannot serve as the sole source of information prior to departure:

a. put-in, take-out points;

b. emergency evacuation point;

c. camp sites, primaries and back-ups;

d. rendez-vous points;

e. alternate put-in and take-out points;

f. environmentally sensitive areas; and

g. identified danger areas, i.e. dams and portages.

39. **Tripping Considerations.** The following points must be taken into consideration when planning a canoe trip:

a. qualifications of participants;

b. experience of participants and pre-trip training;

c. fitness and medical status of all participants;

d. risk management;

e. the weather forecast;

f. appropriate clothing and equipment;

g. use a safety checklist; and

h. familiarity and experience with area and conditions.

40. **Big Rivers, Wilderness Areas and Open Water.** Big rivers in flood, isolated wilderness locations and open water such as coastal waterways can often present extreme conditions compared to the ones encountered in other areas. The following points must be addressed in the organization of training and tripping in such conditions:

a. organization, qualifications, experience and leadership;

b. communications equipment and plan; it may be necessary to have more than one communication system and to pre-set a radio-check itinerary;

c. medical emergency plan; it may be necessary to have medical staff on the trip;

d. evacuation plan; it may be necessary to have a pre-set plan with the local authorities and helicopter access points;

e. canoe repairs and spare equipment;

f. extra food and resources;

g. special licenses and permissions may be necessary in some areas;

h. specialized equipment and training; and

i. risk assessment and management must be appropriate for the activity.

NECESSARY PLANNING

41. **Safety Checklist.** A safety checklist is used during the preparation phase of a canoe trip. It should contain the following points. This list is not exclusive and safety checklists should be amended to match the activity planned:

a. file a trip plan (itinerary, path, expected timings, methods of contact) with local authority, training headquarters or use an on land safety vehicle;

b. safety equipment required by law;

c. first aid equipment appropriate to size of group and type of activity;

d. equipment checked for serviceability;

e. emergency and evacuation plan, including details on how to contact emergency medical services, and headquarters support;

f. food and water;

g. necessary living equipment;

h. communications equipment and system of signals to be used within the group and to access outside help;

i. leadership briefing detailing how the trip will be conducted;

j. river/trip log; and

k. risk assessment and management.

INTENSITY LEVEL OF THE ACTIVITY

42. The intensity of paddling activities is described in the progression matrix for each paddling sport.

ENVIRONMENTAL CONSIDERATIONS

43. Waste management for personal hygiene, food scraps, food containers and human waste for paddling trips and training will follow camping skills of “minimum impact” at minimum and “no trace” in optimum conditions. The impact philosophy of camping and outdoor adventure is established in Chapter 1 and in the RCAC Reference Book.

44. The instructor to cadet ratios will limit group sizes. The maximum allowable visitors at campsites will limit size of tripping groups. Special considerations must be given to environmentally sensitive areas, minimal impact must be imposed onto any given environment. It is better to separate large groups into smaller units and space-out the departure of each smaller group so that no large, intrusive group of paddlers block-up sections of rivers and shore line. Campsites (established or wilderness) should not have to support more than 15 visitors.

WEATHER CONSIDERATIONS

45. Know the weather forecast.

46. It is permissible to paddle in the rain and fog but if it interferes with reasonable visibility or strong winds accompany the rain then it will be necessary for all craft to return to shore, as soon as it is safe to do so. Paddling distance between craft should be diminished during periods of poor visibility, be aware that precipitation may affect water levels and rapid classifications.

47. There shall be no paddling training or tripping while lightning is present, all crafts are to pull over to the closest shore as soon as it is safe to do so.

48. Although extremely cold or hot temperatures do not interfere directly with paddling, training and tripping must be adapted accordingly, paddling gloves and pogies may be necessary. Special consideration should be given to appropriate clothing such as wet and dry suits, and PFD buoyancy according to paragraph 13. Paddling instructors must be trained to recognize signs of heat/cold-related illnesses, treatment and prevention.

49. Although it is possible to paddle in the snow, extreme precautions must be taken to avoid upsets. There must be available resources to rescue and warm up paddlers in the event of an upset in very cold water. Paddling activities will not take place in waters that are partially covered by ice. Special permission from Regional Support Units Commanding Officers or the Directorate of Cadets must be granted for activities that propose to paddle near ice sheets such as the ones seen in polar regions.

LIMITATIONS

50. Paddling is limited by the following conditions. These conditions preclude paddle training/tripping from beginning and also direct its cessation as quickly as safely possible:

a. Paddle training and tripping is restricted to Class III and lesser moving water for open canoes; closed boats (kayaks) may paddle up to Class IV moving water under close supervision. Extra caution must be taken with paddling activities taking place on large bodies of open water.

b. Voyageur canoe and sea kayaks are restricted to Class I and lesser moving water, they are mostly flat water an open watercrafts.

c. Paddling training is restricted to daylight hours. Paddling trips are not restricted by daylight; however caution must be taken while operating in low visibility.

d. Paddling in reasonable visibility applies to paddling on flat water only. In moving water, no paddling will take place if any factors reduce visibility.

e. Paddling for rescue/safety purposes after daylight hours is permissible in calm, flat water only.

f. If it is required to paddle in low-visibility conditions or darkness, then each paddler will wear an activated glow stick on their PFD and each craft will either be equipped with an activated glow stick or navigation lights and one white light. In addition, at least two safety boats must be designated (refer to A-CR-CCP-030/PT-001, Water Training Safety).

g. All water related training and tripping must cease when in the presence of lightning or ice on the water.

h. While paddling in wind conditions described in the Wind Chart for Paddlers of the CCM, it may be required to return to shore, as quickly as it is safe to do so.

i. Paddling groups will not separate unless it was previously arranged.

j. Paddling will not take place when ice sheets covers any part of the waterway being paddled.

k. Combinations of wind and cold water/air temperatures must be taken into consideration in deciding to paddle or returning to shore.

RISK ASSESSMENT AND MANAGEMENT

51. Certain inherent risks exist in all paddling activities for example drowning, physical injury, cold illnesses and equipment loss or damage. The safety regulations set for the Canadian public, service members and CCM members have for purpose to reduce the inherent and accidental risks involved with activities developed around water. The following lists some point to be considered in risk assessment and management of paddling activities:

a. participants: number, age, qualifications, experience;

b. temperature;

c. equipment: necessary, required, desired, personal and group;

d. skill level, qualifications and experience of the leader/instructor; and

e. support and resources.

DEBRIEF

52. Paddling activities will always include some teamwork but will usually also be a very personal experience. The personal challenges each participant will meet can be discussed in a learning/supportive environment. Group leaders should be especially aware of difficulties some participants may have encountered and use judgment in adapting group debriefs. It may be more appropriate to discuss some issues in private. Depending on the intensity of the experience, some participants may require some personal time or a team activity immediately following activity. Staff, especially developing leaders will require special attention and debrief.

LOGBOOK

53. Many paddlers will wish to keep a personal logbook or journal of their paddling activities, qualifications, experience and trips. Such a personal logbook may be used to establish suitability for future paddling activities, courses or instructor positions. Trip and instruction logbooks are an important part of recording and reporting on paddling activities. OPIs, leaders and instructor must keep a logbook of the activities under their charge, as it becomes a legal record of the activity.

SPECIFIC CANOEING SAFETY STANDARDS

CCM REGULATIONS

54. Canoe training and tripping is in large part regulated by A-CR-CCP-030/PT-001, Water Safety Orders. Other safety guidelines as they apply are generic paddling concerns and have been addressed in the section above.

EQUIPMENT REQUIREMENTS

55. Additional equipment description for members of CCM undergoing canoeing training or tripping:

a. **Canoes.** Although aluminum canoes are good for learning basic strokes and how to steer in a flat water environment, they are not adequate for intense, prolonged trips and moving water conditions. Aluminum canoes may be used for flat water and moving water conditions, up to class I. Plastic, Kevlar and composite canoes should be used for moving water training and trips.

b. **Spare Paddle.** Each canoe must have at least one spare paddle, it must be secured but immediately available in emergency (i.e. losing or breaking a paddle in rapids).

c. **Painters.** Six-metres end lines, fore and aft, 10-mm floatable polypropylene rope, with no knots, etc., at the free end which could snag.

56. **Clothing – Kneepads.** Some paddlers may require kneepads.

INSTRUCTOR QUALIFICATIONS AND EXPERIENCE

57. The following qualifications and experience augment the requirements at A-CR-CCP-030/PT-001.

58. Canoeing instructor qualifications:

a. The CO of an RCSU may appoint a person as a canoe instructor who has successfully passed a Canoe Instructor Qualification Course offered by the Regional Cadet Instructor School (RCIS).

b. The CO of an RCSU may appoint a person as a canoe instructor who has successfully passed a Canoe Instructor Qualification Course offered by Paddle Canada or one of its affiliated associations, the Paddle Canada qualification level must be appropriate for the level of the activity:

(1) Paddle Canada Flat Water instructor for flat water activities;

(2) Paddle Canada Moving Water Level 1 instructor for Class I to Class II moving water;

(3) Paddle Canada Moving Water Level 2 instructor for Class III moving water;

(4) Paddle Canada Canoe Tripping instructor Level 1 for flat water trips; and

(5) Paddle Canada Canoe Tripping Level 2 for moving water trips, note the Level 2 instructor qualification is not required but recommended.

c. The CO of an RCSU may appoint a person as a canoe instructor who has successfully passed a canoe instructor qualification course offered by a recognized canoe outfitter or training company after a review of skills and nomination by an RCIS instructor.

d. At least one instructor present at the training session or the trip must hold an emergency first aid qualification.

59. Canoeing instructor experience:

a. Once qualifications are established no additional experience is required for flat water training and tripping.

b. At least one trip leader for moving water trips must have recent experience relative to the training to be conducted, and in similar water conditions as the ones expected on the paddling trip.

c. Moving water trip leaders must have prior experience as at least an assistant trip leader under an experienced trip leader prior to becoming the commander of a moving water expedition or a canoe trip.

d. To conduct moving water, big water or open water trips, trip leaders and instructors with additional qualifications and experience should be sought after to fulfill important leadership and safety roles, the following qualifications and experience are desired:

(1) wilderness first responder; and

(2) swift water rescue technician Level 1;

(3) 10 days and nights of canoe trip/camping leadership; and

(4) 500 km of canoe paddling experience.

60. Paddle Canada establishes national guidelines for canoe training and instructor progression but does not govern canoeing as such in each provinces and territories. The licensing/qualification authority remains with the provincial/territorial canoeing associations. Instructors will have to seek the appropriate qualifications from the province in which they will instruct the activity. The qualifications in most provinces will be very similar to the Paddle Canada national standards with the exception of British Columbia and Quebec. In those provinces, officers will have to follow the instructor qualification progression according to their provincial associations and administer the training accordingly.

61. The canoe program guidelines established at the national level follow the Paddle Canada national guidelines for paddler progression, not instructor qualifications.

SPECIFIC KAYAKING SAFETY STANDARDS

CCM REGULATIONS

62. Kayak instruction is mainly regulated by A-CR-CCP-030/PT-001, Water Safety Orders. Other safety guidelines as they apply are generic paddling concerns and have been addressed in the section above.

EQUIPMENT REQUIREMENTS

63. In accordance with the Small Vessel Regulations, each kayak must be equipped with the safety equipment mentioned in paragraph 14. However because of the nature of kayaks, with relatively small exit holes and limited space the following guidelines are necessary:

a. the buoyant heaving line (15 m in length) must be in an accessible container (such as throw bag) so that it is not loose in the cockpit of the boat; and

b. the bailer must be a small 750-ml container, stored in the rear of the cockpit.

64. Additional safety equipment description for members of CCM undergoing kayak training or tripping:

a. **Kayaks.** Kayaks must be of a modern fabrication with a keyhole cockpit exit. Kayaks should not be significantly modified from their manufacturers specifications; flotation bags must be used in the rear portion the cockpit only, and spray skirts are necessary. Additional compartments must be sellable.

INSTRUCTOR QUALIFICATIONS AND EXPERIENCE

65. River kayaking instructor qualifications:

a. The CO of an RCSU may appoint a person as a kayak instructor who has successfully passed a Kayak Instructor Qualification Course offered by Paddle Canada or one of its affiliated associations; the Paddle Canada qualification level must be appropriate for the level of the activity:

(1) Paddle Canada Flat Water Kayak instructor for flat water activities;

(2) Paddle Canada River Kayak Level 1 instructor for kayaking on Class I to Class II moving water; and

(3) Paddle Canada River Kayak Level 2 instructor for kayaking on Class III and IV moving water.

b. The CO of an RCSU may appoint a person as a kayak instructor who has successfully passed a kayak instructor qualification course offered by a recognized paddling outfitter or training company after a review of skills and nomination by an accredited Subject-Matter Expert (SME) (instructor with RCIS or Paddle Canada qualifications).

c. At least one instructor present at the training session or the trip must hold an emergency first aid qualification.

d. No additional experience is required.

SPECIFIC VOYAGEUR CANOEING SAFETY STANDARDS

CCM REGULATIONS

66. Voyageur canoe instruction and tripping is not regulated in A-CR-CCP-030/PT-001, Water Safety Orders, by name. Never the less, A-CR-CCP-030/PT-001 regulates the use, training and tripping of voyageur canoes in the same way as canoes in general. Specific safety guidelines are further detailed below.

EQUIPMENT REQUIREMENTS

67. In accordance with the Small Vessel Regulations, each voyageur canoe must be equipped with the safety equipment mentioned in paragraph 14., as well as the following items:

a. Voyageur canoes below 6 m in length must carry the necessary safety equipment as listed for regular canoes. In addition, voyageur canoes between 6 and 8 m in length must also carry:

(1) a re-boarding device (such as a watercraft ladder) if the freeboard of the canoes is greater than 0.5 m;

(2) one Class 5BC fire extinguisher if the craft is power driven; and

(3) six Canadian approved flares of Type A, B or C; voyageur canoes can be exempt this last requirement if the craft is travelling in waterways where it can at no time be further than 1 mile (1.6 km) from shore.

b. Voyageur canoes between 8 and 12 m in length, have the same additional equipment required of other watercraft of 6 to 8 m with the exception of the following:

(1) one Class 10BC fire extinguisher if the craft if power driven; and

(2) twelve Canadian approved flares Type A, B or C; except if the craft can at no time be further than 1 mile (1.6 km) from shore, then no flares are necessary.

68. Additional safety equipment is required for members of the CCM undergoing voyageur canoeing training and tripping.

69. **Equipment**

a. **Voyageur Canoes.** Voyageur canoes vary in size and construction. They are usually much bigger than conventional Canadian canoes and measure at least 6 m in length. Some modern materials are used for performance but traditional materials like wood, bark and canvas are used in historical reproduction. Regardless of the construction, the voyageur canoe must be built; of a sturdy frame, with a robust shell, with inherent buoyancy and be used according to manufacturers specifications.

b. **Bailers.** At least two large volume (2 L) bailers must be carried or numerous smaller ones. Voyageur canoes can be very difficult to recover and will usually require much bailing if upset and prior to towing.

c. **Spare Paddles.** Each canoe must have at least two spare paddles that are immediately available in case of an emergency.

d. **Painters.** Six metre end lines, fore and aft, 10 mm floatable polypropylene rope, with no knots, etc., at the free end which could snag.

70. **Clothing – Kneepads.** Some paddlers may require kneepads.

SAFETY BOAT REQUIREMENTS

71. The safety boat requirement for voyageur canoe tripping is a motorized support boat as described in A-CR-CCP-030/PT-001. The minimum requirement for voyageur canoe day instruction (not more than 250 m from shore) safety boat is a voyageur canoe of similar size and ability. There must be at least one safety boat with two operators for every four-voyageur canoes.

TRANSPORTATION REQUIREMENTS

72. Voyageur canoes often weigh 125 kg (300 lb) or more. Their portage and land handling is therefore very difficult and requires a large number of porters and a well-coordinated effort.

73. Voyageur canoes require specialized canoe trailers. These trailers can be larger than regular canoe trailers and as such can be considerably more difficult to manoeuvre. Experienced trailer tow drivers should be sought for this task.

MAX AND MIN NUMBER OF PARTICIPANTS

74. Since safety and rescues are often accomplished with teamwork, there must be a minimum number of craft on the water to ensure the safety of all paddlers:

a. During voyageur canoe training and tripping, there must be a minimum of two craft in a group. Smaller “in-land” type voyageur canoes (approximately 8 m long) must have a minimum of six paddlers and a maximum of 10 occupants. Reasonably, eight cadets and one instructor can operate this size of voyageur canoe with daypacks only in the canoe. Larger “open water” type voyageur canoes (approximately 11 m long) must have at least eight strong paddlers (or 10 smaller people), which allows room for full packs and no more than 16 paddlers with daypacks.

INSTRUCTOR QUALIFICATIONS AND EXPERIENCE

75. Voyageur canoeing instructor qualifications:

a. No national or provincial association exists to govern the sport of voyageur canoeing. The skills defined in the progression matrix for this activity are based on comparable skills for regular tandem canoe training according to Paddle Canada. No specific instructor qualifications exist for voyageur canoe instructors or trip leaders.

b. The CO of an RCSU may appoint a person as a voyageur canoeing instructor who has successfully passed the Canoeing Instructor Qualification Course offered by RCIS, Paddle Canada or one of its affiliated associations; the Paddle Canada qualification level must be appropriate for the level of the activity:

(1) Paddle Canada Flat Water instructor for flat water activities; and

(2) Paddle Canada Moving Water Level 1 instructor for Class I moving water.

c. The CO of an RCSU may appoint a person as a voyageur instructor who has successfully passed a voyageur instructor qualification course offered by a recognized paddling outfitter or training company after a review of skills and nomination by an accredited SME (instructor with RCIS or Paddle Canada qualifications).

d. At least one instructor present at the training session or the trip must hold an emergency first aid qualification.

76. Voyageur canoeing instructor experience (in addition to qualifications above):

a. at least one day of experience paddling the craft prior to conducting day instruction;

b. at least three days of experience steering the craft prior to conducting voyageur canoe trips (including day, overnight and wilderness tripping), the days of experience must take place in similar conditions as the ones expected on the trip; and

c. trip leading experience and qualification equivalent to paragraphs 77.b., c. and d.

SPECIFIC SEA KAYAKING SAFETY STANDARDS

CCM REGULATIONS

77. Sea kayaking instruction and tripping is not regulated in A-CR-CCP-030/PT-001, Water Safety Orders, by name. Never the less, A-CR-CCP-030/PT-001 regulates the use, training and tripping of sea kayaks in the same way as canoes and kayaks in general. Specific safety guidelines are further detailed below.

EQUIPMENT REQUIREMENTS

78. Additional safety equipment description for members of CCM undergoing kayak training or tripping:

a. **Sea Kayaks.** Sea kayaks must be of a modern fabrication with a keyhole cockpit exit. Kayaks should not be significantly modified from their manufacturers specifications; flotation bags should be used in the unoccupied portions of the craft, and spray skirts are necessary. Additional compartments must be sellable.

b. **Spare Paddles.** Every paddling group must carry at least one dismantled spare paddle; it must be secured but immediately available.

SAFETY BOAT REQUIREMENTS

79. The safety boat requirement for sea kayaking tripping is a motorized safety boat as described in A-CR-CCP-030/PT-001. The minimum requirement for sea kayaking day instruction (not more than 250 m from shore) is one instructor craft of the same size as the sea kayaks being used. For sea kayaking trips where motorized safety boats are not appropriate, an instructor boat must be assigned as safety boat in addition to the trip leader boat so that there is at least two instructor boats with each group.

INSTRUCTOR QUALIFICATIONS AND EXPERIENCE

80. Sea kayaking instructor qualifications:

a. The Paddle Canada national guidelines for sea kayak training are accepted in every province and territory of Canada. Provincial canoeing associations are mandated to govern the qualification of sea kayak instructors. Sea kayak instructor qualifications however will easily transfer from one province to another.

b. The CO of an RCSU may appoint a person as a sea kayak instructor who has successfully passed a Sea Kayak Instructor Qualification Course offered by Paddle Canada or one of its affiliated associations; the Paddle Canada qualification level must be appropriate for the level of the activity:

(1) Paddle Canada Flat Water Kayak instructor for flat – calm/lake water day instruction;

(2) Paddle Canada Sea Kayak instructor for sea kayaking conditions in sheltered coastline with calm to light winds (<15 km/h, 8 knots);

(3) Paddle Canada Sea Kayak instructor Level 2 for sea kayaking conditions in exposed coastline with frequent landing options, winds from slight to moderate (<25 km/h, 13.5 knots); and

(4) Paddle Canada Sea Kayak instructor Level 3 or for sea kayaking conditions in exposed coastline with infrequent and difficult landing options, swells and strong winds (>25 km/h, 13.5 knots).

81. Sea kayaking instructor experience: trip leading experience and qualification equivalent to paragraphs 77.b., c. and d. is necessary.

ANNEX A

PADDLE CANADA PROVINCIAL/TERRITORIAL MEMBERS

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ANNEX B

PADDLING PROGRESSION MATRIX

Age	Star Level	Intensity of the Activity	Delivery Method	Progression of the Activity	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-14	Green to Gold (Note)	Fam/Basic	Day Inst	FW – Level A (Tandem)	FW	Fam 1-2 Basic 1 to 4	None	Max 30 Min 4	1:12	LHQ	CIC/CIs Local SME	Detachment
13-15	Red to Gold (Note)	Basic	Day Inst/ Day Trip	FW – Level A, B and C (Tandem)	FW/ Open Water	Fam 1-2 Basic 1 to 4	None	Max 30 Min 4	1:12	LHQ	CIC/CIs Local SME	Detachment
14-16	Silver to Gold (Note)	Basic/ Intermediate	Day Inst	MW – Level 1 (Tandem)	Open Water/ Class I-II	FW or Open 1 to 7; MW 1 to 9	None	Max 30 Min 4	1:6	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
	Silver to Gold (Note)	Intermediate	Overnight Trip	FW/MW – Level 1 (Tandem)	FW/MW Mostly Class I	FW or Open 1 to 7; MW 1 to 9	None	Max 20 Min 6	1:12 (FW)/ 1:6 (MW)	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
15-17	Gold (Note)	Intermediate	Overnight Trip	MW – Level 1 (Tandem)	Open Water/ Class I-II	1 to 12	None	Max 20 Min 6	1:6	Zone	CIC/CIs Local SME Contract With Trade	Region
	Gold (Note)	Intermediate	Day Inst/ Day Trip	FW – Level D (Solo)	FW	1 to 7	Bronze	Max 10 Min 4	1:6	Zone	CIC/CIs Local SME	Region
16-17	NSCE & MC	Intermediate/ Advance	Wilderness Trip	MW – Level 1 (Tandem)	Open Water/ Class I-II	13-14	Bronze	Max 15 Min 6	1:6	Regional	CIC/CIs Local SME Contract With Trade	Region
	NSCE & MC	Intermediate Advance	Day Trip/ Overnight Trip	FW – Level D (Solo)	FW/Open Water	FW or Open 1-7	Silver	Max 10 Min 4	1:6	Regional	CIC/CIs Local SME Contract With Trade	Region
17-18	NSCE & MC	Intermediate/ Advance	Wilderness Trip	MW – Level 2 (Tandem)	Open Water/ Class I-III	1 to 14	Silver	Max 15 Min 6	1:6	Regional/ National	CIC/CIs Local SME Contract With Trade	Regional/National
	NSCE & MC	Intermediate	Day Inst/ Day Trip/ Overnight Trip	MW – Level 1 (Solo)	Class I-II	1 to 14	Silver/Gold	Max 10 Min 4	1:6	Regional/ National	CIC/CIs Local SME Contract With Trade	Regional/National

NOTE

Gold Star level in this chart includes National Star Certification Examination (NSCE) and Master Cadet (MC) unless those levels are identified separately.

Figure 3B-1 (Sheet 1 of 2) Canoeing Progression Matrix

Paddle Canada Canoeing Levels

Flat Water (FW) – Level A (Tandem): Basic intro to canoe paddling skills

FW – Level B (Tandem): Trimming; turns, landings, lifts and carries

FW – Level C (Tandem): Pivots, side displacements, straight line and canoe on vehicles

FW – Level D (Solo): All skills from FW A, B and C for solo paddler

Moving Water (MW) – Level 1 (Tandem): Landings, eddy turns, S-turns, ferries, surfing, portaging and lining in Class I-II water

MW – Level 2 (Tandem): Landings, eddy turns, S-turns, ferries, surfing and portaging in Class I-III water

MW – Level 1 (Solo): All skills from MW for solo paddler, Class I-II water

Paddle Canada/Canoe Safety Skills

1 Swim with PFD – calm response to direction

2 On-water communications

3 FW IAs on dumping – retrieving a canoe

4 FW rescue – canoe over canoe

5 FW treading water

6 FW re-entering a canoe

7 FW AR using a canoe

8 River communications

9 MW swimming a rapid – calm response to direction

10 MW self-rescue

11 MW line toss and rescue

12 MW IAs on dumping – retrieve a swamped canoe

13 MW AR using a canoe

Figure 3B-1 (Sheet 2 of 2) Canoeing Progression Matrix

Age	Star Level	Intensity of the Activity	Delivery Method	Progression of the Activity	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-14	Green to Gold (Note 2)	Fam/Basic	Day Inst	FW	FW	Fam 1-2 Basic 1 to 4	None	Max 30 Min 2 Boats	1:10 (Note 3)	LHQ	CIC/CIs Local SME Contract With Trade	Detachment
13-15	Red to Gold (Note 2)	Fam/Basic	Day Inst/ Day Trip	FW	FW/ Open Water	Fam 1-2 Basic 1 to 4	None	Max 30 Min 2 Boats	1:10 (Note 3)	LHQ	CIC/CIs Local SME Contract With Trade	Detachment
14-16	Silver to Gold (Note 2)	Basic/ Intermediate	Day Inst	MW – Level 1	Open Water/ MW Class I-II	FW or Open 1-7; MW 1 to 9	None	Max 30 Min 2 Boats	1:10 (Note 3)	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
	Silver to Gold (Note 2)	Intermediate	Day Trip/ Overnight Trip	FW Steering/ MW – Level 1	Open Water/ MW Mostly Class I	FW or Open 1-7; MW 1 to 9	None	Max 30 Min 2 Boats	1:10 (Note 3)	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
15-17	Gold (Note 2)	Intermediate	Overnight Trip	MW – Level 1	Open Water/ MW Class I-II	1 to 11	Bronze	Max 30 Min 2 Boats	1:10 (Note 3)	Zone	CIC/CIs Local SME Contract With Trade	Region
16-18	NSCE & MC	Intermediate/ Advance	Wilderness Trip	MW – Level 1- Steering	Open Water/ MW Class I-II	1 to 14	Bronze/ Silver	Max 20 Min 2 Boats	1:10 (Note 3)	Regional/ National	CIC/CIs Local SME Contract With Trade	Regional/ National

NOTES

1. Voyageur canoeing skill levels are not available from paddling governing bodies, the levels used are the equivalent skills used for regular canoes by Paddle Canada.

2. Gold Star level in this chart includes NSCE and MC unless those levels are identified separately.

3. There must be an adult supervisor/instructor in each voyageur canoe or an experienced senior cadet who has demonstrated very good steering skills in voyageur canoes and a great deal of maturity. In this case, an adult instructor in another boat must be in close proximity (50 m).

Figure 3B-2 (Sheet 1 of 2) Voyageur Progression Matrix

Class of Activity

FW

FW Steering

MW Level 1

MW Level 1 Steering

Paddle Canada/Canoe Safety Skills

1 Swim with PFD – calm response to direction

2 On-water communications

3 FW IAs on dumping – retrieving a canoe

4 FW rescue – canoe over canoe

5 FW treading water

6 FW re-entering a canoe

7 FW AR using a canoe

8 River communications

9 MW swimming a rapid – calm response to direction

10 MW self-rescue

11 MW line toss and rescue

12 MW IAs on dumping – retrieve a swamped canoe

13 MW AR using a canoe

14 MW canoe rescue (conscious victims)

Figure 3B-2 (Sheet 2 of 2) Voyageur Progression Matrix

Age	Star Level	Intensity of the Activity	Delivery Method	Progression of the Activity	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-14	Green to Gold (Notes 1 to 3)	Fam	Day Inst	FW	FW	1 to 3	None	Max 15 Min 3	1:6	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
13-15	Red to Gold (Notes 1 to 3)	Basic	Day Inst	FW	FW	1 to 6	None	Max 15 Min 3	1:6	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
	Red to Gold (Notes 1 to 3)	Fam	Day Inst	MW	Class I	1 to 11	None	Max 15 Min 3	1:4	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
14-16	Silver to Gold (Notes 1 to 3)	Basic	Day Inst/ Day Trip	FW	FW/Open Water (Winds <6 knots [11 km/h])	1 to 9	None	Max 15 Min 3	1:4	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
15-17	Gold (Notes 1 to 3)	Intermediate	Day Inst	MW	Class I-II	1 to 13	Bronze	Max 15 Min 3	1:4	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
	Gold (Notes 1 to 3)	Intermediate	Day Trip	FW/MW	FW/MW Mostly Class I	1 to 14	Bronze	Max 15 Min 3	1:4	Zone/ Region	CIC/CIs Local SME Contract With Trade	Region
16-17	NSCE & MC	Intermediate	Day Trip	MW	Class I-II	1 to 16	Bronze	Max 15 Min 3	1:4	Zone/ Region	CIC/CIs Local SME Contract With Trade	Region
17-18	NSCE & MC	Advance	Day Inst	MW	Class III-IV	1 to 16	Silver	Max 10 Min 3	1:4	Region/ National	CIC/CIs Local SME Contract With Trade	Region/ National
	NSCE & MC	Advance	Day Trip	MW	Class III-IV	1 to 16	Silver	Max 10 Min 3	1:4	Region/ National	CIC/CIs Local SME Contract With Trade	Region/ National

NOTES

1. Gold Star level in this chart includes NSCE and MC unless those levels are identified separately.
2. There is to be no overnight camping gear carried in river kayaks; therefore river kayaks are not used for wilderness trips.
3. No river kayaking in open water (more than 6-knots winds).
4. Paddle Canada does not have complete river kayaking program standards; the first level however is the same as sea kayaking.

Figure 3B-3 (Sheet 1 of 2) River Kayaking Progression Matrix

Paddle Canada Progression

FW Kayaking: Intro to kayaking, paddler may use either a river or sea kayak

Safety Skills

1 Swim with PFD – calm response to direction

2 On-water communications

3 FW wet exit

4 FW treading water – retrieving a swamped kayak

5 FW kayak stabilization and re-entering a kayak

6 FW rafting-up

7 FW T-rescue

8 FW bow rescue

9 FW intro to rolls

10 River comms

11 MW swimming – calm response to direction

12 MW self-rescue

13 MW line toss and rescue

14 MW IAs on wet exit – retrieve a swamped kayak

15 MW rolling capability 4/5 each side

16 MW kayak rescue (conscious victim)

Figure 3B-3 (Sheet 2 of 2) River Kayaking Progression Matrix

Age	Star Level	Intensity of the Activity	Delivery Method	Progression of the Activity	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-14	Green to Gold (Note)	Famil	Day Inst	Flat Water Kayaking	Flat Water	1 to 3	None	Max 15 Min 3	1:10	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
13-15	Red to Gold (Note)	Basic	Day Inst	Flat Water Kayaking	Flat Water	1 to 8	None	Max 15 Min 3	1:10	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
14-16	Silver to Gold (Note)	Intermediate	Day Inst	Sea Kayaking Level 1	Sheltered Open Water	1 to 13	None	Max 15 Min 3	1:4	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
15-17	Gold (Note)	Intermediate	Day Trip/ Overnight Trip	Sea Kayaking Level 1	Sheltered Open Water	1 to 13	None	Max 15 Min 3	1:4	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
16-17	NSCE & MC	Advanced	Day Inst/ Day Trip	Sea Kayaking Level 2	Open Water	1 to 16	Bronze	Max 15 Min 3	1:4	Region/ National	CIC/CIs Local SME Contract With Trade	Region/ National
17-18	NSCE & MC	Advanced	Overnight Trip	Sea Kayaking Level 2	Open Water	1 to 16	Bronze/ Silver	Max 15 Min 3	1:4	Region/ National	CIC/CIs Local SME Contract With Trade	Region/ National

NOTE

Gold Star level in this chart includes NSCE and MC unless those levels are identified separately.

Figure 3B-4 (Sheet 1 of 2) Sea Kayaking Progression Matrix

Paddle Canada Progression

Flat Water Kayaking: Intro to kayaking, paddler may use either a river or sea kayak

Sea Kayaking Level 1: Basic theory and skills for a day long sea kayak trip in sheltered waters; coastline must be sheltered with easy landing options; winds <8 knots (15 km/h)

Sea Kayaking Level 2: Provide theory and skills for sea kayaking in moderate conditions, including overnight; coastline can be exposed but has frequent landing options; winds <13.5 knots (25 km/h)

Sea Kayaking Level 3: Provide theory and skills for sea kayaking in advanced conditions during extended periods; paddler must have considerable paddling experience (at least 30 days in sea kayaking Level 2 conditions)

The coastline may be exposed with infrequent and difficult landing options, sea conditions may be rough, including swells and winds greater than 13.5 knots (25 km/h)

Safety Skills

1 Swim with PFD – calm response to direction

2 On-water communications

3 FW wet exit

4 FW treading water – retrieving a swamped kayak

5 FW kayak stabilization and re-entering a kayak

6 FW rafting-up

7 FW T-rescue

8 FW bow rescue

9 Sea Kayaking (SK) communications

10 SK Eskimo rescue

11 SK deep water rescue

12 SK self-rescue

13 SK towing

14 SK all in rescue

15 SK rolling

16 SK knots

Figure 3B-4 (Sheet 2 of 2) Sea Kayaking Progression Matrix

ANNEX C

REFERENCES

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ANNEX D

INTERNATIONAL SCALE OF RIVER DIFFICULTY[1]

CLASS I: EASY

1. Few or no obstructions – All obvious and easily missed with little training.

2. Fast-moving water with riffles and small waves.

3. Risk to swimmers is slight.

4. Self-rescue is easy.

CLASS II: NOVICE

1. Straightforward rapids with wide, clear channels which are evident without scouting.

2. Occasional manoeuvring may be required, but rocks and medium-sized waves are missed easily by trained paddlers.

3. Swimmers are seldom injured and group assistance, while helpful, if seldom needed.

4. Rapids that are at the upper end of this difficulty range are designated “Class II+”.

CLASS III: INTERMEDIATE

1. Rapids with moderate, irregular waves which may be difficult to avoid and which may swamp an open canoe.

2. Complex manoeuvres in fast current and tight passages requiring good boat control frequently exist.

3. Large waves, holes, and strainers may be present, but are easily avoided.

4. Strong eddies and powerful current effects can be found, particularly on large volume rivers.

5. Scouting is advisable for inexperienced parties.

6. Chance of injuries while swimming are low, but group assistance may be required to avoid long swims.

CLASS IV: ADVANCED

1. Intense, powerful but predictable rapids requiring precise boat handling in turbulent water.

2. Depending on the character of the river, there may be long unavoidable waves and holes or constricted passages demanding fast manoeuvres under pressure.

3. A fast, reliable eddy turn may be needed to negotiate the drop, scout rapids, or rest.

4. Rapids may require “must” moves above dangerous hazards.

5. Scouting is necessary the first time.

6. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult.

7.

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1 Taken from Mason, B. *Path of the Paddle*. Toronto, Ontario: Key Porter Books, 1995.

8. Group assistance for rescue is often essential but requires practiced skills.

9. A strong Eskimo roll is highly recommended.

CLASS V: EXPERT

1. Extremely long, obstructed or very violent rapids which expose a paddler to above-average risk or injury.

2. Drops may contain very large, unavoidable waves and holes or steep, congested chutes with complex, demanding routes.

3. Rapids often continue for long distances between pools or eddies, demanding a high level of fitness.

4. What eddies exist, may be small, turbulent or difficult to reach.

5. Several of these factors may be combined at the high end of this class.

6. Scouting is mandatory.

7. Rescue is extremely difficult, even for experts.

8. A very reliable Eskimo roll, and above-average rescue skills are essential.

CLASS VI: EXTREME AND EXPLORATORY

1. Difficulties of Class V are carried to the limits of navigability.

2. Nearly impossible and very dangerous.

3. Risks are high and rescue may be impossible.

4. For team of experts only, at favourable water levels, after close study, and with all precautions.

5. The frequency with which a rapid is run should have no effect on this rating, as there a number of Class VI rapids that are regularly attempted.

CHAPTER 4

CAVING

DESCRIPTION OF ACTIVITY

1. Caving is the sport of cave discovery and exploration through the facilitation of an experienced leader/guide. Caving evolved from the scientific research of speleology (the study of natural caves). Caves are usually found in karst topography, formed from the reaction of mineral and chemical deposits in addition to physical factors. The carbonate bedrock (limestone, dolomite and marble) often found with karst topography can be very fragile and some dangers are associated with this sport. Hazards can include flooding, rock instability, falls, getting stuck, getting lost, light failure, exhaustion, and hypothermia. Depending on the level of difficulty and the distance traveled in the cave, caving can be a strenuous activity requiring reasonably good fitness and health. In Canada, most caves especially on the West Coast and in the Rockies are fairly cold. Subterranean temperature often does not rise above 5°C.

2. For the purpose of adventure training in the CCM, cave categories are divided into the four following categories; these cave categories are based on the British Columbia Speleology Federations proposed categories:

a. **Level 1 – Surface Karst.** This is a surface tour of a karst formation, hiking along the surface of the features of the caves or karst. It may be possible to view the inside of caves from the entrance but participants do not need lights or helmets.

b. **Level 2 – Horizontal and Semi-horizontal Caves.** Defined as a cave where the explorers can walk, hike, crawl, squeeze and scramble without the help of weight bearing devices such as ropes, harness, slings and anchors. If a section of the cave requires such equipment, it is no longer a horizontal cave. The section of the cave leading up to a vertical pitch or the channels of a cave that do not contain vertical sections continue to be considered horizontal. The use of knotted ropes for hand lines, handrails and ladders up to a height of 2.5 m is acceptable in this category. Duration is generally 0.5 to 4 h.

c. **Level 3 – Vertical Caves.** Any cave or section of a cave where for the safety of the participants, rope protection should be used to assist in vertical assent, descent (anything over 2.5 m) or horizontal movement. Special procedures, training and qualifications are required to lead and participate in vertical caving activities.

d. **Level 4 – Submerged Caves.** Any section of cave that requires the participants to be submerged under water deeper than their knees. Special procedures, training and qualifications are required to lead and participate in submerged caving activities.

3. Within each of these cave categories, dangerous and environmentally sensitive conditions exist and precautions must be taken to avoid accidents. Some horizontal cave conditions can be more dangerous to its' visitors than vertical caves that require technical rope knowledge.

AIM OF ACTIVITY

4. The purpose of caving activities in the CCM is to continue the development of learned basic skills in a new and challenging environment. Basic hiking skills are usually necessary to reach the entrance of caves and may also be combined with other adventure activities such as mountain biking, camping and mountaineering. In certain areas, local authorities or caving clubs may have charted established cave systems and the use of navigational skills such as maps and compass and orienteering become an important component of a caving activity. Rope working skills similar to those used in abseiling, and climbing become an important component of Level 3 (vertical) cave visits. Commercial outfitters are usually able to offer great educational and interpretive caving activities.

CANADIAN REGULATIONS CONCERNING SPECIFIC ACTIVITIES

5. National parks, forestry preserves and environmental agencies protect some areas and caves. Private property owners usually block off entrances to caves as they become a liability issue. CCM members will only participate in caving activities in established, sanctioned caves or gain permission from the governing authority/land owner.

MILITARY REGULATIONS

6. Caving is also referred to as potholing in DAOD 5031-10, Adventure Training. Regulations on caving for the CCM from this CFAO were included in this chapter. In cases where caving activities take place on private property or regulated public property (such as parks or forestry reserve), a DND land use agreement or regionally produced contract must be signed by the land owner or the appropriate authority.

CCM SAFETY REGULATIONS

7. Unless specific approval has been given, participants will not sleep overnight in caves. All waste, including all human waste, will be carried out in plastic bags and disposed of in appropriate sanitary facilities. The British Columbia Speleological Society (BCSS) Code of Conduct for Caves (Annex A) must be followed.

AUTHORITY LEVEL

8. Appropriate authority must be granted to carry out all forms of caving activities. The authority level is designated in the progression matrix at Annex B.

GOVERNING BODIES

9. There is no national organization regulating the sport of caving and cave rescues. There are however, many provincial speleological associations, cave rescue associations and caving clubs. Speleological associations and rescue associations often function in partnership with universities and other provincial agencies and should be relied upon as the primary source of information and authority.

10. Certain government agencies (e.g. parks), especially in British Columbia, require that group leaders possess both the self-rescue course (20 h) and the Advanced Rescue Techniques (seven days) offered by British Columbia Cave Rescue and the Alberta Cave Rescue prior to taking groups inside caves.

11. Caving clubs can offer local information, familiarization courses and rescue contacts. The Canadian Cave and Karst Information Server at www.cancaver.ca is a good source of local club listings and general information.

EQUIPMENT REQUIREMENTS

12. Safety equipment for each participant:

a. **Caving or Climbing Helmet.** Must be International Mountaineering and Climbing Federation (UIAA/CE) approved if vertical movement such as climbing or descents are taking place. The helmets must have a secure, snug chinstrap that keeps the helmet from falling forward or back.

b. **One Helmet Mounted Headlamp.** Must carry spare bulbs and batteries.

c. **Two Other Sources of Light.** One of which must be readily accessible. Only one of these sources of light can be a lit flame. Candles and matches are considered only one backup.

d. **Gloves.** Must be sturdy with leather palms and fingers, waterproof and warm as necessary.

e. **Rubber Boots.** Should preferable reach just below the knees, have good sole treads and insulations that fit snugly on the foot; participants will not venture in water deeper than their boots. Hiking boots with many layers of waterproofing are acceptable, and are especially fitting for dry caves.

f. **Clothing.** Must offer insulation, and abrasion protection. Older clothes of little value are preferable since they will likely be damaged in the cave. Warm clothes must be worn under waterproof garment if low temperatures or excessive dampness/wetness are expected.

13. Safety equipment for the group:

a. **Side or Backpacks.** To carry spare clothing, equipment, food and safety equipment.

b. **First Aid Kit.** Must be complete with enough supplies for the number of members in the party and the type of activity.

c. **Communications.** At least a method of communicating within the group and one method of communicating with the outside for help.

d. **Food and Water.** High-energy food and sufficient water for group and for the duration of the activity.

e. **Garbage Bags.** Each group must carry at least one large, resistant quality garbage bags per person. These bags can be used for insulation, carrying out garbage or waterproofing clothing.

f. **Space Blanket.** At least one space blanket for every four people must be carried with the group during a caving (Level 2 or 4) activity.

14. Additional safety equipment for vertical caves (refer to SME):

a. static ropes; at least 11 mm diameter, UIAA/CE approved;

b. seat and chest harnesses;

c. ascenders and descenders;

d. many lengths of 1-in. tubular sling;

e. bolts for anchors; and

f. sufficient locking carabineers.

RECOMMENDED EQUIPMENT

15. Recommended equipment, to include:

a. elbow and kneepads for each participant;

b. cover-alls or over suit;

c. life line: 6 to 10 m piece of 1-in. tubular webbing and one carabineer per person; and

d. change of socks and dry foot wear.

RATION REQUIREMENTS

16. **Type.** There will be no cooking while inside caves; water may be boiled in emergency only, rations should be eaten cold or carried warm in a thermos. IMPs are suitable for caving activities and should be supplemented with high-energy foods such as dried fruit-cereal or chocolate bars; they are ideal since they can be eaten on the go, produce little garbage and do not require heating.

17. **Fluids.** Plenty of hot liquids and sugar drinks are necessary for caving activities.

18. **Amount.** Caving usually takes more energy then hiking, although the progress is often slow, decreased visibility and the foreign environment usually require higher levels of concentration. Caves are usually cold and wet, and in order to function properly participants need high-energy foods in large quantities. It is advised to carry 1.5 times the amount of food normally required.

19. **Preparation.** Since there is to be no cooking inside of caves, food must be eatable from its pack.

TRANSPORTATION REQUIREMENTS

20. Access to and from the training area must be permitted freely.

21. A safety and evacuation vehicle must be present at the closest vehicle access point. For caving activities of Level 3 and 4, the evacuation vehicle must carry a backboard and be able to carry a casualty immobilized on a backboard.

CADET SKILL LEVEL

22. Cadets need to be properly briefed on the BCSS Code of Conduct (Annex A) during caving prior to entering the cave. This briefing needs to be administered to every person, prior to entering a cave, at the beginning of each activity.

23. Cadets and staff need to understand the proper handling, maintenance and function of the their equipment and the safety procedures in place while caving. Participants must be able to use and to change the batteries of their headlamps in the dark (practice blind folded). The caving leader will conduct a complete equipment check prior to entering the cave. Rope ladders must be stabilized or participants must be belayed.

24. Cadets and staff need to be exposed to caves gradually and a simple horizontal or semi-horizontal cave (Level 2) visit is necessary prior to visiting a more technically challenging cave. During an initial cave visit, participants must demonstrate acceptable behaviour, safety awareness and concern for the environmental sensitivity of the cave. Simple caving should be available to the entire cadet population willing to participate in this activity. The cadets must be able to perform the physical work required to reach the cave, visit the site and return to the start point without assistance. Special attention must be given to first time cave visitors, as they may not be aware of claustrophobic reactions. In cases where a cave leader suspects a cave visitor of suffering from claustrophobia, an assessment must be made decide if it's necessary to either evacuate the person. No specific knowledge or skills are required at this point.

25. More advanced caving activities such as in Level 3 (vertical) caves or environmentally sensitive areas should be reserved for senior cadets that have demonstrated the correct attitudes and skills for caving. Participant for Level 3 caves or narrow passages should be carefully selected for mental/behavioural suitability. Special care must be given to identify cadets and staff that are claustrophobic and acrophobic and consider excluding them from the activity. Prior to participating in vertical cave visits, cadets must have demonstrated the following skills:

a. a controlled abseil decent;

b. appropriate/safe behaviour in an horizontal cave;

c. a controlled Single Rope Technique (SRT) descent; and

d. at least 5 m of SRT ascent.

26. SRT is commonly used in vertical caving activities but does not meet the requirements of abseiling. SRT is a separate and independent belay system appropriate for caving and caving SMEs only. Typically, contacts with the walls are avoided to protect them against damages.

PHYSICAL FITNESS

27. In order to participate in a caving activity, cadets must be able to reach the cave site and return without assistance. If long hikes are required to reach cave sites, cadets must have completed a similar terrain and length of hike prior to undertaking the caving activity. If a surface (Level 1) or horizontal cave (Level 2) is readily accessible by a short walk or vehicle access, there is no minimum physical fitness requirement.

28. Even with the use of mechanical advantage aids, cavers in vertical caves (Level 3) must be able to raise their own body either climbing on the surface of the cave or ascending a rope. Because of the requirement to raise one's own body weight, cadets and staff must pass the Silver level physical fitness test prior to participating in a vertical (Level 3) caving activity.

PROGRESSION MATRIX

29. Refer to the progression matrix at Annex B.

QUALIFICATIONS, EXPERIENCE AND FITNESS OF LEADERS AND OPI

30. **Subject-Matter Expert (SME).** Presently, there are no national qualifications recognized for participating and leading caving activities. Local caving clubs, speleology federations and cave rescue teams may have detailed, specific knowledge of certain caves and caving experience in general. Until officers are experienced and become qualified to the provincial/regional standards, SMEs in the community are to be sought and used as activity leaders and/or caving educators. It may be that commercial companies/outfitters are the only SMEs available and require to be contracted for certain caving activities. Cave leaders are considered SMEs when they possess the following:

a. At least two years caving experience (at least 20 logged cave trips) gained within a caving group recognized as belonging to the organized caving community in Canada (reference the Canadian Caving Website). Must have demonstrated proficiency in underground movement, rigging and SRT and cave rescue.

b. Demonstrated understanding of cave conservation issues (as per BCSF Code of Conduct).

c. Completion both BCCR or Alberta Cave Rescue Association (ACRA) Rescue courses or equivalent (e.g. National Cave Rescue Council – USA; National Speleology Society – USA) described below:

   (1) completed a prevention (approximately 20 h) course aimed at small party self-rescue, teamwork, hazard identification, risk assessment, basic rigging, basic SRT, emergency situation evaluation and improvised evacuation techniques; and

   (2) full scale cave rescue (approximately seven days) seminar, which covers cave search and rescue.

d. Favourable references from at least two cavers of recognized experience (preferably officers of organized groups) which confirm the following experience:

   (1) experience organizing and leading at least two caving trips.

e. Demonstrated current certification in occupational first aid or wilderness/advanced first aid beyond the basic level.

LEADER QUALIFICATIONS AND EXPERIENCE

31. In general, hiking experience combined with knowledge and enforcement of the BCSF Code of Conduct for caving is adequate for Level 1 (surface) caving activities.

32. Level 2 cave (horizontal) requires a leader to demonstrate the skills at paragraph 30., in addition to having at least seven caving experiences, two of which must be in a leadership role. The seven caving experiences must be logged and a recommendation from a senior member of a local/provincial caving organization is required. The reference must have accompanied the candidate in at least two visits, one of which must be while the candidate was in a leadership role. All Level 3 and 4 cave activities require an SME as activity leader.

33. **Medical/First Aid Qualifications.** At least one person must be standard first aid qualified for Level 1 and 2 cave activities. At least one person for every six participants must be advanced/wilderness equivalent first aid qualified for Level 3 and 4 trips.

34. The OPI must be a military person with command experience equivalent to at least a platoon commander; this is a requirement even if a civilian SME is acting as trip leader. The OPI must be familiar with general safety rules and protocols in training cadets; have demonstrated calm leadership skills and be able to recognize dangerous situations.

INSTRUCTOR TO CADET RATIOS

35. The following ratios of instructor to cadets must be adhered to:

a. **Level 1.** As per hiking (one instructor for every 10 cadets).

b. **Level 2.** One instructor for every four cadets.

c. In some cases, SMEs may make recommendations to allow a lesser instructor to cadet ratio in Level 2 caves. When no severe dangers are immediate, short familiarization activities in such a cave may use a ratio of one instructor for every seven cadets.

d. **Level 3 and 4.** One instructor for every four cadets.

MAX AND MIN NUMBER OF PARTICIPANTS

36. A minimum number of four cavers can participate in any caving activity. Participants will remain in groups of at least four, and will not divide once underground. Level 2, 3 and 4 caves will have a maximum number of eight participants. In some caves, environmentally sensitive structures or areas dictate that groups be no bigger than five visitors at a time. Consult with local authority, landowner, caving clubs or park officials. Certain caves may have facilities to accept big groups such as walkways, handrails and observation platforms; in such a case the cave authorities will dictate the maximum number of participant (usually no more than 15).

MANAGEMENT GUIDELINES

37. As much information as possible about the caving activity must be recorded and prepared prior to seeking permission to participate in caving activities. Proper and complete communication/liaison with local authorities, landowners, caving clubs, and caving rescue agencies is required as part of the development of a caving program and independent caving activities.

NECESSARY PLANNING/REQUIRED PREPARATORY WORK

38. **Required Recces.** At least one leader must have prior experience and knowledge of the road access, vehicle parking, cave entrance and the proposed visit path while inside the cave. If the cave system becomes complicated and has many channels, the leader must have an intimate knowledge of the cave.

39. **Lifelines.** If visiting areas of the cave that are not well known and complicated, then a life-line to the outside must be established; if the lifeline is likely to endanger or damage sensitive cave structures or ecology, then that section of the cave is not to be visited. When in doubt, err on the side of caution, do not jeopardize the caving code of conduct, except in an emergency.

40. **Required Plans With Local Authorities/Rear Party.** Although rear party/Point of Contact (POC) are not required during Level 1 and 2 caving activities, they are recommended. During Level 3 (vertical) caving activities however, POC must be in place either at the entrance of the cave or a nearby visitor centre/vehicle access. If local authorities govern the cave, permission must be granted for the cadets to visit. A complete itinerary, contact numbers and emergency contacts must be filed with these authorities. In the case where no local authority governs access to a cave, permission must still be acquired if the cave is on private property. In the event where no cave authority are readily available from the entrance of the cave/visitor centre, a rear party of at least one officer/adult must be in place at the entrance of the cave or nearby vehicle access. If the cave is a long hike (more than one hour away), then the rear party must have communication access to outside emergency agencies. The POC/rear party must have a detailed emergency plan and contact numbers.

41. **Communications.** Communications within caves are usually unreliable. The caving group's communication network therefore will usually rely on the rear party or the governing authority of a cave. Reasonable attempts should be made to inquire and test a variety of communications equipment that will not be intrusive to the environment is which the activity takes place. The rear party must have in hand a check-in protocol and activity itinerary.

42. **Navigational Aids.** The caving group must carry at least two maps that indicate the access to the cave, and an addition map and instructions must remain with the POC/rear party. If navigational aids are functional within the cave, and relied upon for navigation or exit, then there must be at least two with the group.

43. The **Emergency Plan** must contain contact information, and details including:

a. contact method to and from the cave to POC/rear party;

b. contact information for outside emergency/evacuation services;

c. number, name, medical coverage, any special pertinent medical details; and contact info for each participants;

d. activity itinerary;

e. who and how will basic first aid situations be handled;

f. who and how will severe first aid situations be handled; and

g. evacuation plan:

(1) priority of evacuation;

(2) self-rescue evacuation;

(3) EMS assisted evacuation; and

(4) EMS controlled evacuation.

TIME OF DAY/YEAR REGULATIONS AND WEATHER CONSIDERATIONS

44. Caving will normally take place during daylight hours. Some circumstances however may present special educational opportunities in visiting caves at night. Such visit will only take place under the leadership of an SME, with the special permission of Regional Cadet Support Units. It is recommended that caving activities take place mostly in the summer and fall. Winter condition may make the access difficult and spring floods may severely affect the safety of caving participants. SMEs however are able to make recommendations in regards to such conditions and should be sought to make such assessments. Local clubs and land authorities may also have set visiting seasons according to special environmental conditions of the cave at different period of the year.

DURATION OF THE ACTIVITY

45. Caving activities will usually last about half a day, and only take place over one meal. Temperature, personal hygiene and fatigue are serious factors in deciding the duration of the cave visit. Cave leaders must continually monitor the group and make the necessary adjustments to their itinerary. Cave visits will never last longer than originally planned.

ENVIRONMENTAL CONSIDERATIONS

46. **Waste Disposal.** All waste will be carried out of the cave. Human waste, food garbage, used first aid supplies and especially fuels must be taken out of the caves and disposed of appropriately.

47. **Size of Group.** The instructor to cadet ratios, in addition to the maximum and minimum number of cavers, was set previously in this instruction. Those group sizes first address the safety requirements of this activity and also the environmental impacts of visits on caves. For theses reasons, caving activity numbers are very low compared to other activities.

48. **Cooking.** There will be no cooking or boiling water in caves. The only exception to this instruction is in case of medical emergency.

49. **Specially Sensitive Areas.** All reasonable precautions must be taken to minimize the impact of cave visits on sensitive areas and cave structures. Damages that result from accidents and emergency procedures must be reported both to the cave authority and the appropriate Regional Cadet Support Unit (use the after action report from Annex D of Chapter 1).

LIMITATIONS

50. Under normal circumstances, CCM members will only participate in caving activities up to Level 3. In special situations, permission may be granted for CCM members to participate in Level 4 caving activities if recommended to do so by an SME and appropriate precautions are taken, e.g. PFD are worn, lifeguards are present, underwater search lights are available and can be used, and the SME has extensive experience in these conditions. If the environmental factors preclude these safety precautions, then the activity will not be permitted.

51. If environmental conditions change drastically or an injury/medical condition develops during a caving activity, the entire group must be evacuated as quickly as possible.

RISK MANAGEMENT

52. This chapter has identified very specific safety guidelines and safety considerations to be included in every level of risk managements. The following list of factors is not exclusive:

a. classification of the cave, access and authority governing it;

b. temperature inside and outside the cave;

c. equipment available and required;

d. age, experience and preparation of the participants;

e. emergency plan;

f. weather and environmental conditions; and

g. leadership and SMEs.

DEBRIEF

53. Caving will always include some teamwork but is also a very personal experience. The low levels of light, the high levels of concentration and the personal challenges each participant will meet can be discussed in a learning/supportive environment. Group leaders should be especially aware of difficulties some participants may have encountered and use judgment in adapting group debriefs. It may be more appropriate to discuss some issues in private. Depending on the intensity of the experience, some participants may require some personal time or a team activity immediately following a cave visit. Staff, especially developing leaders, will require special attention and debrief.

LOGBOOK

54. In order to progress to other/different caving activities, participants will have to keep a record of their experience in the form of a logbook. Logbooks and journals are especially appropriate for the purpose of review and reflection in caving activities since most participants will experience very different and personal things. A logbook or a journal offers the opportunity to log all the appropriate information and the many important details of the caving activity. Either the OPI or the SME/caving leader must sign off logbooks if they are to be used as an assessment of performance or experience.

ANNEX A

BRITISH COLUMBIA SPELEOLOGICAL SOCIETY – CODE OF CONDUCT FOR CAVING ACTIVITIES

CAVING SAFETY: INDIVIDUAL RESPONSIBILITIES

1. **Before Entering the Cave**

   a. Let someone at home know of your itinerary and approximate schedule.

   b. Select appropriate personal equipment and supplies including headlamp, head protection, protective clothing (including gloves and kneepads), footwear, food and basic emergency supplies.

   c. Know how to properly use your personal equipment.

   d. Check your equipment and ensure that it is in good working condition.

   e. Check the weather and project the (hydrological) response of the cave to adverse weather conditions.

   f. Don’t go underground under the influence of alcohol, drugs, or medication that could impair your judgment or performance.

   g. Inform the trip leader of any personal physical or mental limitations.

   h. Never plan to cave alone (groups of three are good; groups of four are preferable).

2. **Inside the Cave**

   a. Accept the trip leader’s decisions.

   b. Identify, recognize, and evaluate inherent caving hazards (e.g. flooding, hypothermia, fatigue, rock falls, etc.).

   c. Don’t exceed your abilities and limitations.

   d. Stay together (minimum two persons for side passages).

   e. Don’t linger at entrances or other potentially unstable zones, or vertical exposed areas (e.g. pitches, overhanging ice).

   f. Avoid jumping, sliding, or making (unnecessarily) rapid manoeuvres.

   g. Don’t attempt something untried without a backup plan (e.g. backing out of a tight passage).

   h. Don’t share your equipment.

   i. Never throw anything into pitches.

   j. Avoid unnecessary chatter while moving (this distracts other participants who may value silence more than you).

   k. Know the agreed-upon communication protocol (used when voice communications are impractical or impossible).

CAVING SAFETY: TRIP LEADER'S RESPONSIBILITY

3. **Before Entering the Cave**

   a. Let someone on the surface know of your plans.

   b. Know how to activate an outside cave rescue operation.

   c. Ensure that all collective and personal equipment is matched to the cave's difficulty (and in good working order).

   d. Ensure that basic emergency equipment and supplies are taken (e.g. first aid kit, pulleys, heat source, extra rope, etc.).

   e. Plan the underground activity according to age, experience, skills, and physical condition.

   f. Have a back-up plan.

4. **Inside the Cave**

   a. Distribute experienced cavers to the front and back of group (and use the "buddy system" within the group).

   b. Progress through the cave as fast as the slowest person.

   c. Don't ask someone to perform something beyond his or her capability.

   d. Use fall protection for all vertical exposures.

   e. Recognize the symptoms of fatigue and hypothermia.

   f. Don't hesitate to call a halt to a "bad" trip.

MINIMUM IMPACT CAVING

5. Consult with prior visitors about sensitive features (this may also reduce the need for redundant visits).

6. Limit the size of the party to the minimum required for a safe visit (four is a reasonable lower limit).

7. Use a good source of light (avoid using acetylene-based headlamps in confined delicate areas).

8. Use suitable protective clothing.

9. Don't smoke or make fires (even at the entrance).

10. Stay on the established "minimum impact" route if already established, and avoid touching anything.

11. Never break or soil speleothems (including flowstone and moonmilk).

12. Don't "push" delicate passages.

13. Don't overuse sensitive caves or sensitive interior passages.

14. Never mark surfaces.

15. Don’t discard anything (remove all modern discarded objects, even if you were not responsible for putting them there!).

16. Don’t urinate or defecate inside the cave (carry out all human waste in the case of bivouac).

17. Don’t disturb hibernating bats or other sensitive organisms.

18. Avoid altering natural air or water flows.

19. Improve personal technique and abilities rather than permanently modifying the cave.

    a. Use bolts only as a last resort where natural or non-marking anchors (cams, chocks, etc.) cannot be used.

    b. Place bolts or other permanent fixtures only after thoughtful consultation with the broader caving community, particularly other persons familiar with the cave.

    c. Use only high-quality bolts, and tag all bolts with the date of installation

20. Avoid the use of explosives.

21. Avoid unique or unusual sediment accumulations.

ANNEX B

CAVING PROGRESSION MATRIX

Age	Star Level	Intensity of the Activity	Delivery Method	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-14	Green to Gold (Note 1)	Familiarization	Day Instruction	Level 1	1 and 2	None	Max 30	1:10	LHQ	CIC/CIs Local SME	Detachment
	Green to Gold (Note 1)	Familiarization	Day Instruction	Level 2	1 to 4	None	Max 15 Min 4	1:7	LHQ	CIC/CIs Local SME	Detachment
13-15	Red to Gold (Note 1)	Familiarization/ Basic	Day Instruction	Level 1-2	1 to 6	None	Max 5 Min 4	1:4	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
14-16	Silver to Gold (Note 1)	Basic	Day Instruction	Level 1-3 (Note 2)	1 to 7	Bronze	Max 5 Min 3	1:4	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
15-17	Silver to Gold (Note 1)	Intermediate	Day Trip	Level 1-3 (Note 2)	1 to 7	Silver	Max 5 Min 3	1:4	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
16-17	Gold (Note 1)	Advanced	Day Trip	Level 1-3 (Note 2)	1 to 7	Silver	Max 5 Min 3	1:4	Zone/Region	CIC/CIs Local SME Contract With Trade	Detachment/ Region/ National
17-18	NSCE & MC	Advanced	Day Trip	Level 1-3 (Note 2)	1 to 7	Silver	Max 5 Min 3	1:4	Zone/Region	CIC/CIs Local SME Contract With Trade	Detachment/ Region/ National

NOTES

1. Gold Star level in this chart includes NSCE and MC unless those levels are identified separately.

2. Because of the upper body strength requirements, participants in Level 3 caving must be at the Silver Fitness level, age in this case is a guideline. The caving OPI must confirm the suitability of each participants.

Figure 4B-1 (Sheet 1 of 2) Caving Progression Matrix

Classification of Caves

Level 1 – Surface

Level 2 – Horizontal

Level 3 – Vertical

Level 4 – Submerged

Safety Skills

1 Displays good response/behaviour to direction

2 Uses and wears safety equipment properly

3 Follows the Caving Code of Conduct

4 Understands and uses cave communications

5 Does not exhibit signs of acrophobia or claustrophobia

6 Recognizes danger and backs off

7 Uses SRT; descend and ascend

8 Navigates in a cave

Figure 4B-1 (Sheet 2 of 2) Caving Progression Matrix

ANNEX C

REFERENCES

British Columbia Cave Rescue (BCCR) (www.cancaver.ca).

British Columbia Speleological Society Code of Conduct (BCSC) (www.cancaver.ca).

Canadian Cave and Karst Information Server (www.cancaver.ca).

McClurg, D. *Adventures of Caving: A Beginner's Guide for Exploring Caves Softly and Safely.* Carlsbad, New Mexico: D & J Press, 1996.

National Speleological Society (NSS) and National Cave Rescue Commission (NCRC), USA.

CHAPTER 5

CLIMBING AND MOUNTAINEERING

GENERAL

1. This chapter is written in seven sections. The general portion applies to all climbing and mountaineering activities in general contained in this chapter. The subsequent sections contain those details specific to each activity.

DESCRIPTION OF ACTIVITY

2. Climbing is defined as an upward travel requiring the use of hands. In this chapter, climbing is further divided into the following categories: top roping; bouldering; lead and multi-pitch climbing; ice climbing; mountaineering; and abseiling.

3. Although mountaineering as described below does not always involve the continuous use of hands as seen in traditional climbing sports, it is included in this chapter because it is considered an advanced level of skill that requires very good technical knowledge and safety. Ascending a geographical feature that never requires the use of hands and remains below 2000 m is therefore considered hiking or backpacking for the purpose of this publication. Since there is some overlap and natural progression from hiking to climbing/mountaineering, some aspects of this chapter will build on the safety standards of that activity. Unless otherwise specified, the terms “climbing”, “climb” and “climber” will be used generically for all the activities described in this chapter including mountaineering.

4. **Top Roping.** Is the most common form of climbing. Whether on a rock face or an artificial wall, the activity is very similar. In all cases, a belayer uses a friction device controlling an anchored safety line that feeds from a point above the climber. The belayer may be situated either at the top or the bottom of the vertical climb, and in such a case, using a change of direction mechanism at the top. The climber is always tied into the safety rope and the belayer takes up most of the slack created by the climber ascending. A bit of slack in the rope allows the climber to manoeuvre and not be pulled up by the belay line. In case of a fall, the climber will fall a very short distance mostly due to the dynamic qualities of the rope.

5. **Bouldering.** Bouldering at the foot of cliffs and on artificial surfaces has become very popular and will likely continue to attract more climbers because of the low level of expertise and equipment required to participate in this sport. Bouldering practices the skills of climbing without the use of harnesses and safety ropes; it takes place on the lower 2 m of climbing surfaces and usually involves using crash mats and/or spotters (as described at Annex B) for safety instead of belay lines. The feet of the climber are never more than 1 m from the ground. The climber usually travels horizontally on a rock surface near the bottom instead of moving vertically. In this activity, very advance climbing skills can be practiced without expertise in safety rope management and time-consuming anchor set-up. If resources are available, i.e. enough instructors and facilities to allow room to climb with no vertical overlap, bouldering can be an ideal concurrent activity to top roping. As described at paragraph 11., Class 3 of the Yosemite Decimal System (YDS) rating scale that usually uses some scrambling will also be considered bouldering even though this activity overlaps hiking and mountaineering. Because no safety lines are used to protect the climber, other very stringent limitations set for this activity can be found at Annex B.

6. **Lead and Multi-pitch Climbing.** Occurs when climbers install protection on the rock face as they ascend, they are not tied into a rope at the top. In order to do this, the lead climber attaches their belay rope to either natural (trees or rock features) or artificial (chocks, friends, bolts, pitons or even ice screws when ice climbing) points of protection along the route. Then by passing their belay line through these wall attachments, the last installed protection becomes the highest point of attachment to the wall the climber has in case of an accident. When the climber falls, they will fall twice the length of the rope since their last protection in addition to the stretch of the entire rope between them and the belayer. Climbing a multi-pitch route takes place when a climber or teams of climbers are ascending a tall wall that requires multiple independent climbs. Multi-pitch climbs are used because of rope length limitation, to switch lead climbers or to keep the team together. Both lead and multi-pitch climbing require a great deal of knowledge, skill, experience and physical strength, it will therefore be limited to cadets who are 15 to 18 years of age.

7. **Ice Climbing.** Takes place on iced walls and steep surfaces, usually caused by water from a high water table seeping out of rock but it is also possible over frozen waterfalls and compacted crystalline snow/ice such as seen in glaciers. In addition, ice climbing requires very specialized equipment and techniques, i.e. crampons, boots, ice tools (axe, hammers, picks) and waterproof ropes. Just like rock climbing where there are many different kinds of rocks and some are better for climbing than others, i.e. granite (igneous) vs sandstone (sedimentary); ice from different sources can be very different. Ice formed from water is usually clear or mostly white if it's oxygenated. Depending on the mineral content of the rock outcrops where the water is seeping from, ice may carry some of those minerals, e.g. iron in the water/ice forms a rusty-orange colored ice; glacial ice formed from hard packed snow, pressure and freeze/thaw cycle often has a blue hue or a lot of grit forming a dirty ice called black ice. Ice climbing routes differs significantly from rock climbing because ice often has a chance to "mend" itself once the sun has melted the top layer and it has a chance to re-freeze overnight. Because of this mechanism, an ice-climbing route can be slightly different from one day to the next or very different from one weekend to the next. However, ice can be very fragile and unstable, a seemingly solid ice tool can hold up a climber one minute and quickly crumble leaving the climber sliding down an icy face the next, numerous factors complicate the technical aspect of this sport. It is also important to note that ice climbing equipment costs quickly become a limiting factor when practicing this sport.

8. **Mountaineering.** For the purposes of the CCM, Army Cadet mountaineering shall be defined as a sport consisting of an assent, foot travel and sufficiently technical in nature to require skills in rope groups, crevasse rescue, avalanche assessment and/or river crossing (Chapter 5, Annex C). Mountaineering normally takes place at greater than 2000 m above sea level and may be above the tree line and/or on glaciers. For this publication, foot travel in alpine areas (no ice, glaciers or technical climbing) shall not be considered mountaineering, rather it is a bridge between hiking/backpacking and mountaineering. Mountaineering, including glacier travel, is a distinct activity, and should not be confused with winter hiking/camping or polar travel, which involves different characteristics, safety concerns, required skills and equipment.

9. **Abseiling.** Army cadet abseil is defined as making a descent of a steep rock-face or approved tower by using a rope fixed at a higher point with the abseiler attached to a secondary Top Rope Belay system.

9A. **Rappeling.** To rappel is defined in B-GL-392-003/PF-001, Rapelling Techniques and Procedures, as to descend by means of a rope passed around the body in such a way as to allow a rapid but controlled descent. Rappel training is progressive and designed to build self-confidence and overcome personal fear. Specific standards for cadet participation in rappel training are detailed in CATO 45-03, Military Rappel Training.

10. **Rating Systems.** Many rating systems exist for rock climbing and alpine mountaineering. The CCM will use the YDS, the most common rock climbing rating scale in North America. Other rating scales will be used for bouldering and ice climbing and they will be discussed in those specific sections/annexes.

11. Numerical scales are popular because their progression of difficulty is predictable, e.g. a climb rated as a 4 using the YDS scale is more difficult than a climb rated as a 3 and a 5 is more difficult than a 4. Furthermore, YDS rates the hardest/most technical section on a terrain/route. For the CCM, the YDS scale is also considered advantageous since it includes ratings for travel over non-vertical terrain such as described in Chapter 7. It should be noted however that no "One" rating scale is perfect and there are as many opinions on each rating scale as there are climbers. The following word description of the YDS scale was modified from the book *Mountaineering: Freedom of the Hills,* 1997:

a. **Class 1.** Hiking, usually on a trail.

b. **Class 2.** Simple scrambling, crossing obstacles with the occasional use of hands, requires route-finding skills, may be backcountry dense bush.

c. **Class 3.** Angle is steep enough that hands are required for balance; scrambling on rocks using hands and feet, a rope might be carried.

d. **Class 4.** Simple climbing, often with exposure requiring a rope belay. A fall could be serious or fatal. Natural protection can usually be easily found.

e. **Class 5.** Technical rock climbing begins. Climbing involves the use of ropes, belays, and the placement of natural or artificial protection for the leader in case of a fall. An open ended decimal and alphabetical extension to Class 5 exists for rating vertical climbs within this category.

(1) **Class 5.0 – 5.4.** Novice vertical climb, two hand and two footholds are available for almost every move.

(2) **Class 5.5 – 5.6.** Some climbing technique is required, four holds may not be obvious.

(3) **Class 5.7.** At least one move on the climb is missing one hand or foothold.

(4) **Class 5.8 – 5.9.** Climbing shoes are recommended because holds are much smaller, good skill and strength is required.

(5) **Class 5.10.** Excellent skills and strength required, has moves that may only have one good hold.

(6) **Class 5.11 – 5.14.** Very advanced level of skill and strength required, expert level, with overhang(s) in the later range of this rating (5.13 and up).

AIM OF ACTIVITY

12. The aim of climbing is to develop self-confidence and self-reliance by exposing and challenging CCM members to the diverse geological formations of Canada and the world, usually in mountainous terrain. Most often, climbing activities require hiking skills in order to reach the necessary rock and ice surfaces we are seeking to climb. Such activities are beneficial to the physical health of the participants; they offer a learning environment not available before and explore the outdoor surroundings of a specific area. Climbing can be a physically and mentally demanding activity that must therefore be delivered with an eye to skill, experience and fitness progression. All humans have, at least initially, a certain amount of inherent acrophobia (fear of heights) and since climbing safety standards are very stringent, most climbers can practice this sport perceiving a high level of risk but operate within a relatively safe environment. Numerous youth groups and team-building companies use climbing activities to help the participants develop self-confidence and a sincere appreciation for nature's beauty, it is also a perfect learning environment for geology, ecology and history discussions.

CANADIAN REGULATIONS CONCERNING SPECIFIC ACTIVITIES

13. Specific regulations pertaining to climbing exist in certain areas such as national and provincial parks, nature preserves, world heritage sites and private land. Access to Canada's outdoors is readily available through private owners, municipalities, parks officials and forestry districts. It is sometimes necessary to gain a land use permit or special licenses for some specific areas. Often, there are costs and special regulations (limiting the groups size, access points, camping practices, waste disposal, safety communication and emergency/evacuation plans) associated with the use of special areas. Members of the CCM must adhere to all regulations in a specific area in addition to DND regulations.

14. Commercial property accessed through the purchase of passes or permits. The purchase of a permit is a legal contract between the owner/governing agency and the CCM members and as such grants right of use according to the conditions under which the permit was purchased.

MILITARY REGULATIONS

15. DAOD 5031-10 regulates adventure training in the CF.

AUTHORITY LEVEL

16. Respective RCSU COs may authorize climbing activities undertaken at the LHQ such as top roping and bouldering. Climbing and mountaineering introducing the more advanced skills will only be performed at the zone, region and/or national level and will therefore require those levels of approvals.

GOVERNING BODIES

17. There is no national or provincial governing body for climbing although numerous agencies use this activity in the delivery of their curriculum. There are many qualification courses, clubs and agencies that offer climbing experience and qualifications; however law requires none of them. The Association of Canadian Mountain Guides (ACMG) is the most recognized national agency in this field and it is the only Canadian association that holds a membership with the International Federation of Mountain Guides and Associations (IFMGA). ACMG offers three types of guide certification based at the University College of the Cariboo in Kamloops, British Columbia. These certifications are recognized as the industry standards for this publication. Current information regarding these certifications is available on the ACMG Website:

a. **Mountain Guide.** A certification for professional mountain guides that includes three-certification streams: Alpine Guide, Ski Guide, and Rock Guide. The coveted Mountain Guide certification is issued to those holding both the Alpine and Ski Guide qualifications and this certificate is recognized by IFMGA.

b. **Hiking Guide.** A two-level certification program including Day Hiking Guide and Backpacking Guide.

c. **Climbing Gym Instructor.** A three-level certification program progressing in skill, responsibility and program management skills.

18. Although there is no legislation governing climbing, load bearing and safety climbing equipment such as ropes and helmets sold in most countries including Canada must meet the International Mountaineering and Climbing Federation (UIAA) or Conformité Européenne (CE) specifications.

a. Association of Canadian Mountain Guides (ACMG)
P.O. Box 8341
Canmore, AB T1W 2V1
Telephone: 403-678-2885
Fax: 403-609-0070
Email: acmg@acmg.ca

b. International Federation of Mountain Guides and Associations (IFMGA) (www.ifmga.info).

c. Canadian Avalanche Association (CAA) (www.avalanche.ca).

d. International Mountaineering and Climbing Federation (UIAA), based in Switzerland (www.uiaa.ch).

e. The Alpine Club of Canada has many local associate clubs, seminars, activities and mountain huts for club members:
P.O. Box 8040, Indian Flats Road
Canmore, AB T1W 2T8
Website: www.alpineclubofcanada.ca

f. La Fédération québécoise de la montagne et de l'escalade (FQME)
4545 Pierre-de-Coubertin Avenue
P.O. Box 1000, succursale M
Montréal, QC H1V 3R2
Telephone: 514-252-3004
Fax: 514-252-3201
Toll Free: 1-866-204-3763
Email: fqme@fqme.qc.ca
Website : www.fqme.qc.ca

g. École nationale d'escalade du Québec (ENEQ) offers the qualification program recognized by FQME. They offer three levels of qualification (facilitator, monitor [initiator] and instructor) for three-activity streams: artificial surface, rock and ice climbing; no alpine qualification exists at the time this document was prepared.

155 Charles Aubertin
Boucherville, QC J4B 4P7
Telephone: 514-276-4840
Fax : 450-641-0841
Website : www.eneq.org

19. There is no international, national or provincial governing body for indoor and/or outdoor man-made climbing/abseiling wall/site standards. In this case, all non-CF man-made climbing/abseil walls/sites need to be approved by RCSU COs. There are many abseil/climbing wall/site providers/manufacturers who conform to or exceed safety standards for procedures and equipment from various and recognized agencies/associations who have an accreditation program. However the following are the most recognized and recommended agencies/associations in this field:

a. Outdoor Industry Association (OIA) – Climbing Gym Association (CGA) (http://www.outdoorindustry.org/).

b. Climbing Wall Association (http://www.climbingwallindustry.org/).

c. Outdoor Recreation Coalition of America (ORCA) (http://www.orca.org/subgroup/CWIG/) – Climbing Wall Industry Group (CWIG) (http://www.monosculpt.com/cwig.htm).

EQUIPMENT REQUIREMENTS

20. The additionally required activity specific equipment is listed in the respective section starting at paragraph 61.

21. The following equipment is required to be carried where appropriate to the activity:

a. Clothing:

(1) must be appropriate for the weather conditions and the activity;

(2) offer wind and rain resistance;

(3) long-sleeve shirts and long pants;

(4) flexibility without drag, usually form fitting;

(5) layered as necessary;

(6) be comfortable; and

(7) be complete including head, hands, legs and foot warmth.

b. Footwear:

(1) A hiking/approach shoe is necessary when travelling to a climb location (refer to Chapter 7 for specific terrain requirements, i.e. flat, inclined or wet terrain).

(2) Every type of climbing in this publication requires specific footwear. For this purpose, refer to the appropriate and specific sections starting at paragraph 61.

c. Necessary food and water (see rations at paragraph 24.).

d. Communications:

(1) Communication must be established before start of activity.

(2) It is required that all groups, regardless of their proximity to medical attention should be able to use at least one method of communication to request help.

(3) Hand-held radios, short-wave radios, cellular phones and satellite phone must be considered so that communications is reliable with at least one means.

e. First aid:

(1) First aid equipment must be carried with every group that travels independently.

(2) First aid equipment must be adequate for the activity and in sufficient quantity for the size of the group.

(3) Climbing in remote/wilderness areas requires Advanced First Aid equipment and/or life support.

f. Group equipment (for one-day activity):

(1) At least one mean of obtaining and purifying water is required.

(2) Appropriate maps and compasses for navigation.

(3) Whistles.

(4) Bear spray or anti-predator device is required if travelling in bear/predator country.

g. Climbing equipment:

(1) All weight bearing and safety equipment used for climbing activities must be certified UIAA, CE or ISO manufacturing standards seals.

(2) D E L E T E D

(3) D E L E T E D

(4) D E L E T E D

(5) All hardware that have grooves that are more than 1/8 in. in depth should be retired.

(6) Cadets must be instructed to report any loss or damage to equipment immediately.

(7) A maintenance schedule and log must be kept for all climbing equipment including rope, slings, hardware, helmets and harnesses.

(8) D E L E T E D

(9) D E L E T E D

(a) D E L E T E D

(b) D E L E T E D

(10) D E L E T E D

(11) D E L E T E D

(12) D E L E T E D

(13) D E L E T E D

(14) D E L E T E D

(15) All climbing equipment shall be cared for and inspected in accordance with the standards outlined in A-CR-050-822/PC-001, *Qualification Standard, Cadet Instructors Cadre – Abseil Instructor*. On inspection, any equipment determined to damaged or sufficiently worn shall be retired from service.

(16) Ropes shall be inspected prior to use and at the conclusion of each day's activities. Under acceptable conditions (i.e. dry, room temperature, and away from chemicals, dirt, acids, sunlight, and alkali compounds) a rope will have a shelf life of five years. However, a rope should be retired within four years of usage from the date of first use or, in a case where damage to the rope is noticeable, a rope shall be deemed unserviceable immediately.

(17) Harnesses shall be inspected prior to use and at the conclusion of each day's activities. Under acceptable conditions a commercial seat harness that is UIAA/CE approved will be retired after five years of usage from the date of first use or, in a case where damage to the harness is noticeable, a harness shall be deemed unserviceable immediately.

RECOMMENDED EQUIPMENT LIST

22. Further developed in the respective sections starting at paragraph 61.

23. Hand-held signal flares and at least one GPS should be considered if the activity is taking place in a wilderness setting.

RATION REQUIREMENTS

24. Rations that can be eaten at the training site are recommended for climbing activities. The use of such rations will minimize lost training time and logistical issues that may result from moving cadets to and from meal locations.

a. Type:

(1) lightweight;

(2) can be eaten warm or cold; and

(3) high energy.

b. Amount:

(1) Sufficient quantity for each member for the duration of the activity, keeping in mind that climbing activities are very demanding therefore may require additional calories in concert with the three principles below:

(a) The colder the conditions, the more calories are required to keep the body warm.

(b) The heavier the equipment and the steeper the incline, the more nutrition the body needs to do that work.

(c) Appetite usually sharply increases around the third day of sustained work.

(2) Plan accordingly:

(a) In warm days and nights, while operating out of a base camp or carrying small loads and not too much incline climbing, plan for 2500 to 3000 calories per person per day.

(b) In warm days and cool nights, travelling with full packs, long trips (more than five days) plan for 3000 to 3500 calories per person per day.

(c) In cool days and cold nights, travelling for long days with full packs, early spring and late fall, trips more than seven days plan for at least 3500 to 4500 calories per person per day.

(d) In cold days and extremely cold nights, mid-winter temperature and conditions, in alpine environments and extremely strenuous days require at least 4000 to 5000 calories per person per day.

(e) Although most people lose their appetite at high altitude, it is important for their safety to continue consuming an adequate amount of nutrition and fluids.

(3) Include extra rations for a safety margin (usually at least one extra meal for a short trip and two meals for a five-day trip).

(4) Carrying enough calories for demanding trips, especially when technical equipment must also be divided between the team members is a constant challenge for organizers and leaders for these activities. Pack weight soon becomes problematic.

c. Preparation:

(1) Permission must be granted for open fires and open fire cooking (under supervision).

(2) Firewood may not be available (alpine regions above the tree line and on glaciers) or if available should not be used because of the environmental impact of abusing such scarce resources in alpine regions.

(3) All participants must be very confident on stove operations and repairs.

(4) Rations should be easily prepared especially with low-level skilled cadets.

(5) Climbing participants with experience and acquired skills may graduate to complete meal planning and preparation of fresh ration, special care must be taken to ensure adequate nutrition, calorie count, weight and against contamination.

(6) Waste disposal must be in accordance with facilities and/or lease use agreements and shall follow the principles of Leave-no-trace as outlined in the Star Program.

d. Fluids:

(1) Should be readily available in large quantities; climbers often restrict the amount of fluids they consume in order to reduce the weight they have to carry and the work they have to do to supply it. Every effort must be made to supply climbers with as much fluids as possible.

(2) Weight is prohibitive, filter water as necessary, ensure streams and waterways are available, and the appropriate approved filter/purifier is used.

(3) Melting snow and boiling water for purification may be necessary (allow rolling boil for five min – complications at altitude, be prepared) consider the extra fuel requirements.

(4) Use chemical purification such as iodine and chlorine (bleach) sparsely and for short durations, following the manufacturer's directives. In some cases, specific chemical treatments are prescribed according to the conditions, follow the manufacturers directive and obtain medical approval. Note that chemical water treatments are contra-indicated for certain medical conditions.

(5) Consider flavouring the water and including electrolyte replenishment as required.

TRANSPORTATION REQUIREMENTS

25. Safety vehicle and evacuation means may be the same vehicle. A safety vehicle must be present at a location as close as possible to the leader. The safety vehicle must have appropriate communications means to be in contact with both the trip leader and local authorities or the vehicle keys must be available to the climbing group. A first aid kit must be available in the safety vehicle at all times.

26. In wilderness settings where no land or water safety vehicle is accessible within three hours, proper arrangements must be made for helicopter evacuations through either search and rescue, the CF, parks services, police/fire department, alternate service provider or the national coast guard prior to the expedition. If this last option is used, proper communications must be established with the evacuation agency. In this case, communications will usually require satellite phone access and a prepared list of the appropriate phone numbers and emergency procedures. Plan ahead.

CADET SKILL LEVEL

27. The basic skills and application of climbing should be made available to every cadet that wishes to participate. The development of advanced climbing skills such as mountaineering and lead climbing however must be introduced progressively to cadets who demonstrate the desire to participate, in addition to a certain amount of ability and physical strength. Climbing can be introduced as a graduation skill to hiking and backpacking.

a. Qualification:

(1) There are no qualifications necessary to take part in most climbing activities.

(2) Some of the advanced levels of climbing activities require star level qualification prior to participation (refer to matrixes at Annex A).

b. Experience:

(1) No skill specific experience is necessary for familiarization and basic participation to top roping, bouldering and ice climbing.

(2) Climbers must have successfully participated in at least a one-day climbing activity prior to taking part in an overnight climbing trip.

(3) Climbers must have participated in at least one backpacking activity carrying their own equipment and finishing with no great discomfort prior to participating in any overnight climbing activity.

c. Basic knowledge/technical skill:

(1) Climbers must have participated in and demonstrated reasonable skill prior to taking part in a more physically/technically demanding climbing activity.

(2) If resources and expertise are available, participants may attempt any classification of climbing technical skill one grade above what they have already achieved, e.g. attempt a 5.8 climb after demonstrating the ability to climb a 5.7.

(3) Climbers must be able to climb at least a 5.7 reliably prior to being exposed to lead and multi-pitch climbing.

d. Basic knowledge and technical skills such as hiking and camping will often serve as a prerequisite to more advanced composite skills such as mountaineering and multi-day climbing expeditions.

e. Other selection criteria:

(1) Cadet may be selected and/or matched in specific groups according to their qualifications, experience and level of physical fitness, so that:

(a) participants demonstrating the specific levels of the criteria listed above may be spread between groups in order to have many groups of similar strength; or

(b) participants of similar strength and ability may be grouped together and paired with activities designed specifically to challenge them.

(2) Cadets must express a willingness to participate in mountaineering, lead and multi-pitch climbing prior to becoming participants for those expeditions.

PHYSICAL FITNESS

28. Some of the more advanced levels of climbing activities require certain levels of physical fitness assessed using the Army Cadet Fitness Test (ACFT) (refer to progression matrix at Annex A). Participants who have a poor strength to weight ratio may face severe difficulties.

TRAINING PROGRESSION

29. Refer to the climbing progression matrixes at Annex A.

QUALIFICATIONS, EXPERIENCE AND FITNESS OF LEADERS AND OPI

30. Refer to the independent sections for each specific activity requirements.

31. Many climbing service providers advertise that they are “certified” and/or “qualified” and often these terms are used interchangeably. This publication uses the following functional definitions:

a. a recognized governing body issues a certification to a qualified candidate giving that person the license to use their skills according to the certification standard; and

b. a qualification is awarded after proof of acceptable performance of a certain skill.

32. Numerous associations, clubs and outdoor adventure schools offer qualification courses. And although many qualifications are similar, there is usually no direct relationship and recognition between them. Organizers of climbing activities must be sceptical of issuing agency, equivalency and the currency of qualifications of guides and instructors. Ask for proof.

33. This publication and the CCM will recognize the ACMG certifications as the industry standard. ACMG certifications take into consideration qualifications, experience and technical skill. Unfortunately, ACMG certifications are most popular with guides from British Columbia, Alberta and Quebec. **It may be necessary for Region Commanders to approve other qualifications and experience but a reasonable equivalency assessment should be used as the basis for authorization**. Other national association certifications that are recognized by IFMGA such as the American Mountain Guides Association (AMGA) are also acceptable.

34. Note that the ACMG Alpine Guide supersedes the Rock Guide certification and the Mountain Guide supersedes all other ACMG certifications.

35. Mountain operations instructor CF qualification is equivalent to the ACMG Alpine Guide certification.

36. Required qualifications:

a. at least one instructor present for climbing training sessions must hold a standard first aid qualification; and

b. at least one instructor present for a climbing wilderness trip (remote area – more than three hours from emergency medical services) must hold a wilderness first responder qualification.

37. At least one leader must have command experience.

INSTRUCTOR TO CADET RATIOS

38. Three factors accepted by the climbing industry are used to identify the instructor/supervision requirements for climbing activities:

a. type of climbing;

b. intensity; and

c. remoteness from Emergency Medical Services (EMS).

39. Refer to the activity specific matrixes at Annex A for instructor to cadet ratio requirements. In addition, **there must be at least two staff on every climbing activity**.

MAX AND MIN NUMBER OF PARTICIPANTS

40. Because of the impact on trails, routes and campsites, groups' sizes must be restricted. It is recommended that large groups be divided into smaller ones, depart at staggered intervals, use different trails and/or camp separately. Since the survival of the group will usually rely on teamwork, groups must have at least four members in rural conditions and six in isolated wilderness (remote) areas. Instructors should also assess the specific conditions at the climbing site and adjust the number of participants in each party. Refer to the activity specific matrixes at Annex A for details.

MANAGEMENT GUIDELINES

41. **Group Organization and Leadership for Climbing Activities.** Leadership and command responsibilities are often shared with experienced cadets in order to teach the necessary skills, develop self-confidence and teamwork. However, cadets will rarely possess the necessary skill and experience to act as leaders for climbing activities. Adult leaders must take responsibility for the following:

a. Responsibilities of the leader:

(1) final check of weather forecast and avalanche conditions;

(2) register with local authorities if required;

(3) distribute maps and navigational aids;

(4) check equipment, ensure all participants have required equipment and clothing:

(a) personal clothing and equipment;

(b) group equipment (tents, stoves, ropes, food, etc.); and

(c) redistribute equipment if required to even out conditions;

(5) set pace and keep track of group;

(6) route selection;

(7) set rope teams as required;

(8) set rendez-vous points as required;

(9) scout obstacles and difficult areas;

(10) establish turn around times;

(11) act as the first level of rescue/first aid;

(12) manage safety equipment; and

(13) ensure no one leaves the trailhead until all participants have returned.

b. Responsibilities of the last person in a climbing group:

(1) keep group together;

(2) alert for necessary rescue/first aid;

(3) assist in the management of safety equipment; and

(4) trail sweep on the way up and down.

c. Group responsibilities:

(1) keep groups in close enough proximity to communicate; spread out if necessary;

(2) maintain sufficient spacing and tempo;

(3) keep the next person up and down from you in sight, signal to stop if necessary;

(4) communicate with rope group;

(5) communication must carry up and down hill; and

(6) give the right of way to uphill travelling groups, very large groups or emergency evacuations.

42. **Rescues.** Leaders and instructors must be prepared for emergencies. All climbers must be trained in basic rescue and first aid so that they may help themselves in an emergency. Also, it is beneficial to develop a team approach to rescues and instruct climbing group team rescues; this practice is especially necessary in mountaineering. All climbers must be instructed in the following:

a. The priority of rescue must always be:

(1) people; and

(2) life sustaining equipment (i.e. food, communications, first aid equipment, emergency beacons).

b. Group responsibilities in a rescue:

(1) Alert other climbers of accident or dangerous conditions.

(2) Climbers must initiate whatever self-rescue or first aid is necessary and accept assistance.

(3) Other climbers are to assist in a rescue to the best of their abilities when it is safe to do so and when instructed.

(4) All climbers not involved in the rescue are to cease their activity, descend if instructed to do so, clear the path, gather as a group, and wait for further instruction.

43. **Wilderness Safety.** Many aspects of wilderness safety are important when climbing; they must however be emphasised in wilderness settings:

a. Environmental conditions:

(1) altitude sickness (acute mountain sickness) progressing to high altitude pulmonary edema-HAPE or high altitude cerebral edema-HACE;

(2) coping with animals;

(3) coping with the weather;

(4) heat and cold injuries and illness;

(5) coping with poisonous plants; and

(6) water requirements.

b. On route to a climb or mountaineering considerations:

(1) trail/march discipline;

(2) detached climber, lost or stranded group;

(3) accidental injuries and repetitive stress injuries, endurance problems (fatigue and dehydration);

(4) route/obstacle crossing options; and

(5) teamwork.

c. Camp safety:

(1) fire and stove safety;

(2) food storage and food loss;

(3) terrain stability; and

(4) equipment inspection and repair.

NECESSARY PLANNING

44. **Familiarity With Area.** At least one instructor, usually the trip leader, must be familiar with the climb sites. The climbs must be pre-scouted and pre-climbed. Only established routes are to be climbed.

45. **Planning.** The leader is ultimately in charge, even when some components of the organization of climbing activities is delegated, the leader must be familiar will all aspects of the organization and execution. Climbing leaders, especially those who are planning climbing trips and mountaineering, should develop a checklist using the factors listed in this chapter (the list below may be further developed locally), such as:

a. Identify the objective/purpose of the activity, select an activity and the proposed route.

b. Conduct appropriate recces: physical recce preferably, map recces, collect local knowledge and include:

(1) start and finish points;

(2) routes to and from the activity;

(3) emergency evacuation points;

(4) permits, licenses and reservation requirements;

(5) camp sites, primaries and back-ups;

(6) rendez-vous points;

(7) alternates;

(8) environmentally sensitive areas; and

(9) identified danger areas, i.e. avalanche zones.

c. Match the activity to the objective, to include:

(1) intensity;

(2) skill, fitness and experience required of participants;

(3) number of participants, i.e. what is the ideal number of climbers for the specific activity, does it match the number of climbers proposed?

(4) equipment concerns:

(a) equipment and clothing to be supplied to participants;

(b) equipment and clothing the participants must possess; and

(c) necessary resources.

d. Develop a trip itinerary or schedule to the objective, to include:

(1) distance and time required to reach the climb;

(2) distance and time required to execute the activity; and

(3) expected weather conditions, i.e. season typical.

e. Develop a safety checklist to be used during the preparation and the execution of all climbing trips. It should contain the following points (this list is not an exclusive list. Safety checklists should be amended to match the activity planned):

(1) file a trip plan (itinerary, path, expected timings, size of group, skill of group, safety equipment included, communications, evacuation points) with local authority, training headquarters or use an on land safety vehicle;

(2) safety equipment required by law;

(3) first aid equipment appropriate to size of group and type of activity;

(4) equipment checked for serviceability;

(5) emergency and evacuation plan, including details on how to contact emergency medical services, and headquarters support;

(6) food and water;

(7) necessary living equipment;

(8) communications equipment and system of signals to be used within the group and to access outside help;

(9) wildlife consideration (i.e. bears, predators);

(10) leadership briefing detailing how the trip will be conducted;

(11) trip log; and

(12) risk assessment and management.

f. Obtain authority, support and resources.

g. File your trip plan with a rear party or contact.

TIME OF YEAR REGULATION

46. Although climates and geography differs in the many different regions of Canada, and it is possible to encounter snow out of season, hiking and backpacking in this instruction is restricted to the method of foot travel cross-country in the Canadian climate from spring to fall. Winter camping, snowshoeing, cross-country ski touring, mountaineering and glacier travel will be covered separately in their specific section starting at paragraph 61.

DURATION AND INTENSITY LEVEL OF THE ACTIVITY

47. Reasonable durations and intensity level according to age and training background has been developed in the progression matrixes at Annex A.

ENVIRONMENTAL CONSIDERATIONS

48. Only the safety of the participants will supersede the priority with which environmental stewardship is followed.

49. Waste management for personal hygiene, food scraps, food containers and human waste during climbing activities will follow camping skills of “minimum impact” at a minimum and “leave no trace” in optimum conditions.

50. The instructor to cadet ratios will limit group sizes. The maximum allowable visitors at campsites will limit size of tripping groups. Special considerations must be given to environmentally sensitive areas, minimal impact must be imposed onto any given environment. It is better to separate large groups into smaller units and space-out the departure of each smaller group so that no large, intrusive group of hikers block-up sections of a path or an area visited. Campsites (established or wilderness) should not have to support more than 15 visitors.

51. Climbing sites have been destroyed by abusive behaviour or left in poor condition they have been tarnished so that climbers are constantly reminded that the area is not pristine. All members of the CCM must aspire to climb clean:

a. Leave the rock face (climbing route) the way you found it or better, don’t install fixed pitons and bolts.

b. Don’t use even removable aids if they will damage the rock face.

c. Climb the route the way it was published, do not add aids.

d. Use chalk sparingly, wipe it off as much as possible.

e. Use clean shoes.

f. Don’t disturb rocks or vegetation, replace them if you have to, don’t tear off moss, if it’s in your way, then you are not climbing the route correctly.

g. Don’t abuse natural anchor points and rope lines.

WEATHER CONSIDERATIONS

52. Know the weather forecast, learn how to forecast and react to weather. When travelling in lightning/storm prone areas and times of year, get weather updates every 12 hours.

53. It is common to hike or backpack in the rain, fog or snow but not to climb although some mountaineering can still take place. If the rain or fog interferes with reasonable visibility or strong winds accompany the rain, then it is necessary to take extra precautions. Spacing between participants should be diminished during periods of poor visibility, be aware that precipitation may affect water levels and the stability of the terrain being crossed. If dangerous terrain is scheduled for crossing, wait out the weather.

54. In case of lightning, shelter should be sought, if not in a building (cabin) then in a dense stand of trees. The lightning precautions below must be followed:

a. Stay off high peaks, ridges, spires, narrow valleys and large bodies of water.

b. A large group of trees is the best place to be.

c. In case of storm forecast, do not plan to climb or travel in such formations as the ones listed in paragraph 54.a.

d. Keep track of weather forecast either by communications or by forecasting the weather yourself; keep track of storm movements, in writing/chart preferably.

e. Avoid shallow caves and overhangs, protection from the rain does not automatically protect from lightning.

f. Keep a safe distance from metal and graphite objects (climbing equipment, walking poles, tripods or external framed packs); cache them away and retrieve them later if necessary.

g. Change location if your hair stands on end.

h. Insulate yourself from the ground using a backpack (without metal frame) or air mattress; minimize your height and crouch down feet together, do not lay down completely.

i. If travelling as a group, spread out (10 m apart).

j. Be prepared to administer appropriate first aid (i.e. CPR, electrical burn, blunt trauma, shock).

55. Although extremely cold or hot temperatures may not interfere directly with climbing, activities must be adapted accordingly; extra or specialized clothing and equipment may be necessary. Special consideration should be given to appropriate clothing such as outer layers used for wind and water protection, footwear and living equipment such as tents, sleeping bags and water containers. All participants must be trained to recognize signs of heat/cold-related illnesses, treatment and prevention.

LIMITATIONS

56. The following conditions shall be adhered to in the planning of a climbing activity and, where situations change, shall necessitate the cessation of a climbing activity when underway. These conditions include:

a. At least one instructor must be familiar with the climb sites, they must be pre-scouted and pre-climbed. Only established routes are climbed.

b. Any injury that stops a climbing team must stop the entire climbing party until the situation is resolved.

c. Serious injuries warrant the evacuation of entire climbing parties.

d. Be aware and plan accordingly during hunting seasons, environmentally sensitive areas or times of the year (e.g. mating season), avalanche season, warm days but frosty nights seasons/altitudes, rain or tornado season.

e. Climbing will only occur during daylight hours. Mountaineering is sometimes required after dark or prior to sunrise in order to take advantage of weather conditions, it must take the low-visibility condition into consideration. Mountaineering in low visibility will not take place in dangerous conditions where a slip or fall could be dangerous, e.g. on a steep side of a hill or near waterways or crevasses. Light, communication and roping up must be used to keep the group together, e.g. headlamps, glow sticks, reflective tape and verbal communication.

f. When travelling on slippery surfaces near water or crossing obstacles over water, backpackers must untie chest straps and waist belts so they can free themselves quickly if necessary.

g. Climbing groups will not separate unless it was previously arranged.

h. Belay lines must be used for any movement where the feet are 1 m above the ground, bouldering ceases at this point; crash mats or pads must be used for bouldering moves that take place higher than one step up the surface.

i. Only on rare occasions, with intense supervision will cadets have the necessary skill, experience and physical fitness to climb above a 5.10-class rock (top rope, lead or multi-pitch).

j. Only on rare occasions, with intense supervision will cadets have the necessary skill, experience and physical fitness to climb above V2-class bouldering.

k. Only on rare occasions, with intense supervision will cadets have the necessary skill, experience and physical fitness to climb above a W5-class ice face.

l. Some form of acclimatization is required for all climbs above 3000 m.

m. A structured and assessed acclimatization is required for all climbs above 4000 m.

n. Regardless of acclimatization, teenagers age 15 and below will not climb above 3500 m and teenagers age 19 and below will not normally climb above 5000 m.

o. Wading into water up to a maximum of mid-thigh depth in wet river crossings with currents (refer to river crossing at Annex C).

p. Minimum ice thickness requirements for crossing frozen lakes and rivers at Annex D.

q. Reliable communications shall be maintained in case of a requirement for emergency evacuation.

RISK ASSESSMENT AND MANAGEMENT

57. Certain inherent risks exist in all climbing activities, e.g. physical injury such as sprained or broken ankles, cold illnesses and impact wounds; other risks include equipment loss or damage. The safety regulations set for the Canadian public, service members and CCM members have for purpose; to reduce the inherent and accidental risks involved with activities developed around the wilderness. The following lists some points to be considered in risk assessment and management of climbing activities:

a. participants: number, age, qualifications, experience;

b. temperature and weather;

c. equipment: necessary, required, desired, personal and group;

d. skill level, qualifications and experience of the leader/instructor; and

e. support and resources.

DEBRIEF

58. The personal challenges each participant will meet can be discussed in a learning/supportive environment. Group leaders should be especially aware of difficulties some participants may have encountered and use judgment in adapting group debriefs. It may be more appropriate to discuss some issues in private. Depending on the intensity of the experience, some participants may require some personal time or a team activity immediately following activity. Staff, especially developing leaders, will require special attention and debrief.

59. In many ways, at least perceived by the participants, climbing is often considered more individual than a team activity. When teams evolve, they are relatively small and their experience can be very intense. The debrief should reflect this duality and possibly separate individual and team goals, skills and accomplishments.

LOGBOOK

60. Many participants may wish to keep a personal logbook or journal of their climbing activities, qualifications, experience and trips. Such a personal logbook may be used to establish suitability for future climbing/mountaineering activities, courses or instructor positions, in such a case climbers should have their logbook signed by an instructor in order to attest to the climber's experience. Trip and instruction logbooks are an important part of recording and reporting climbing activities. OPIs, leaders and instructors must keep a logbook of the activities under their charge, as it becomes a legal record of the activity.

SPECIFIC TOP ROPE SAFETY STANDARDS

EQUIPMENT REQUIREMENTS

61. In addition to the equipment requirements at paragraph 21., top roping groups must have the following:

a. One CE/UIAA approved helmet for every climber, instructors and anybody else close to the climb site.

b. At least two ropes of 10.5 mm CE/UIAA approved.

c. Belay devices must be inspected prior to use, often because they are a source of friction; they are particularly susceptible to developing sharp edges and cracks if impacted since they are usually tempered during manufacturing. At least three appropriate belay (friction) devices are requested for the activity. The following types are recommended:

(1) ATCs;

(2) tubers;

(3) stitch plates with springs; or

(4) GriGris.

d. The belay devices below are acceptable but the four above are preferable:

(1) figure 8s;

(2) carabiner break system;

(3) munter hitches; or

(4) body belays.

e. Ample screwgate locking type carabiners with manufacturer-minimum tensile breaking strength of 22.22 kN (5000 lb).

f. Non-screwgate carabiner may only be used for non-load bearing purposes.

g. Ample 24-mm (1-inch) nylon tubular sling for anchors, improvised chest harnesses.

h. Harnesses:

(1) optimum – seat harness – any manufacturer – UIAA/CE approved w/chest harness as required; and

(2) minimum – improvised Swiss seat w/improvised chest harness as required.

i. Boots/shoes:

(1) optimum – any manufacturer – lug sole, ankle support, all leather, steel shank; and

(2) minimum running shoes and CF combat boots.

INSTRUCTOR QUALIFICATION

62. Top roping:

a. Rock face: At least one ACMG Rock Guide or RCSU CO approved equivalent must be on site for supervision.

b. Minimum qualification for each climbing instructor: ACMG Assistant Rock Guide or RCSU CO approved equivalent.

c. Artificial wall: Same as paragraph a. or ACMG Gym Instructor Level 1 or RCSU CO approved equivalent.

SPECIFIC BOULDERING SAFETY STANDARDS

EQUIPMENT REQUIREMENTS

63. In addition to the equipment requirements of the general section of this chapter, bouldering groups must have the following:

a. One CE/UIAA approved helmet for every climbers.

b. Crash mats and/or spotters.

INSTRUCTOR QUALIFICATION

64. **Bouldering**

a. At a low-intensity level, bouldering is very much scrambling and there is no requirement for a skill specific qualification. Although CIC officers are not specifically trained for bouldering during the Abseil Instructor and MOC Land Course, these courses offer a general understanding of safety measures, danger recognition and situation awareness, CIC officers with the following qualifications and experience may carry out bouldering activities:

(1) artificial and natural environment up to V0: Minimum qualification for CIC officers – Abseil Instructor and MOC Land; and

(2) CIC officers must also have experience with the use of climbing mats, spotting and climbing techniques/principles, see limitations and Annex B.

b. V0 to V2: Minimum qualification ACMG Assistant Rock Guide, ACMG Gym Instructor Level 1 or RCSU CO approved equivalent.

SPECIFIC LEAD AND MULTI-PITCH CLIMBING SAFETY STANDARDS

NOTE

Cadets must be able to climb at least at a 5.7-level prior to being introduced to lead and multi-pitch climbing.

EQUIPMENT REQUIREMENTS

65. In addition to the equipment requirements of the general section of this chapter, lead and multi-pitch groups must have the following:

a. One CE/UIAA approved helmet for every climber, instructors and anybody else close to the climb site.

b. At least two ropes of 10.5 mm CE/UIAA approved.

c. Belay devices must be inspected prior to use, often because they are a source of friction; they are particularly susceptible to developing sharp edges and cracks if impacted since they are usually tempered during manufacturing. At least three appropriate belay (friction) devices are requested for the activity. The following types are preferably recommended:

(1) ATCs;

(2) tubers;

(3) stitch plates with springs; or

(4) GriGris.

d. The belay devices below are acceptable but the four above are preferable:

(1) figure 8s;

(2) carabiner break system;

(3) munter hitches; or

(4) body belays.

e. Ample screwgate locking type carabiners with manufacturer-minimum tensile breaking strength of 22.22 kN (5000 lb).

f. Non-screwgate carabiner may only be used for non-load bearing purposes.

g. Ample 24-mm (1-inch) nylon tubular sling for anchors, improvised chest harnesses.

h. Harnesses:

(1) optimum – seat harness – any manufacturer – UIAA/CE approved w/chest harness as required; and

(2) minimum – improvised Swiss seat w/improvised chest harness as required.

i. Boots/shoes:

(1) optimum – any manufacturer – lug sole, ankle support, all leather, steel shank; and

(2) minimum running shoes and CF combat boots.

INSTRUCTOR QUALIFICATION

66. Lead and multi-pitch climbing:

a. Minimum qualification: ACMG Rock Guide or RCSU CO approved equivalent.

SPECIFIC ICE CLIMBING SAFETY STANDARDS

EQUIPMENT REQUIREMENTS

67. Eye protection of some kind, usually sunglasses or goggles.

INSTRUCTOR QUALIFICATION

68. Ice climbing:

a. Minimum qualification: ACMG Alpine Guide or RCSU CO approved equivalent.

SPECIFIC ABSEIL SAFETY STANDARDS

NOTE

All abseil sites will be approved by the applicable RCSU CO before use.

EQUIPMENT REQUIREMENTS

69. In addition to the equipment requirements of the general section of this chapter, abseil groups must have the following:

a. Helmets:

(1) optimum – any manufacturer – approved by UIAA/CE.

b. Abseil, belay and rescue ropes:

(1) optimum – any manufacturer – kernmantel of 10.5 mm – UIAA/CE approved; and

(2) minimum – CFSS – nylon three-strand 7/16 inch diameter.

c. Slings – minimum of 1000 kg strength:

(1) any manufacturer – kernmantel of 7 mm or 1-inch webbing – UIAA/CE.

d. Prusik loops – any manufacturer – kernmantel of 7 mm.

e. Carabineers – screwgate locking type – any manufacturer – minimum standards for load bearing carabineers, two person loads, 22.22 kN (5000 lb) and UIAA/CE approved or accredited.

f. Figure 8 descender – any manufacturer.

g. Gloves, leather, size medium (NSN 8415-21-510-5233), size large (NSN 8415-21-510-5232).

h. Boots/shoes:

(1) optimum – seat harness with chest harness – any manufacturer – UIAA/CE approved; and

(2) minimum running shoes and CF combat boots.

i. Harnesses:

(1) optimum – seat harness with chest harness – any manufacturer – UIAA/CE approved; and

(2) minimum – improvised Swiss seat w/improvised chest harness as required.

SAFETY EQUIPMENT

70. In addition to the safety equipment requirements of the general section of this chapter, the following is required at each site:

a. First aid kit, suitable for number of personnel on site.

b. Stretcher:

(1) optimum – litter, stokes (NSN 6530-21-809-9755) w/spinal board (or NSN 6530-21-868-5609); and

(2) minimum – litter, folding (NSN 6530-21-108-1610) w/spinal board (or NSN 6530-21-868-5609).

ANCHOR STANDARDS

70A. CIC abseil instructors shall ensure that standards for anchor points conform to the following general guidelines:

a. A natural anchor will meet the following requirements:

(1) A tree (alive) able to sustain considerable weight (6-inch diameter).

(2) A secure rock outcrop or boulder free of abrasive edges or padded to avoid damage to anchor slings.

b. A man-made anchor will meet the following requirements:

(1) Free of rust and corrosion if metal and solid and not rotted if wooden.

(2) Be certified to sustain a shock load of 22.22 kn in any direction.

SAFETY CHECKLIST

71. The following shall be observed on all abseil training sites:

a. An abseiler shall be belayed at all times.

b. The abseil instructor shall designate an appropriately sized area directly below the decent line as a “rock fall” zone in which helmets shall be worn.

c. Abseils shall be under direct supervision of a qualified instructor although, to belay, an assistant may be appointed by the on-site instructor.

d. Belayers shall have been briefed and have dry-practiced belay technique prior to belaying. The belayer is to be secured to a different anchor than the abseil rope and shall be wearing suitable gloves.

e. All abseil locations are to be inspected and swept clear of any debris prior to use.

e1. D E L E T E D

f. Participants not abseiling are to wait in a designated area clear of top or bottom of the abseil location.

g. Communication between the abseiler and instructor shall be maintained throughout the descent and communications to the belayer is to be unobstructed.

h. All rock faces and all man-hand made sites (other than CF towers) require approval from RCSU COs.

i. D E L E T E D

INSTRUCTOR QUALIFICATION

72. Notwithstanding the qualifications of the instructor, it is essential that approving authorities satisfy themselves that the instructor has sufficient and suitable leadership qualities to match the scope of the abseil training.

73. CIC abseiling instructor qualification shall be obtained by passing the Abseil Instructors Course. Abseil activities conducted by CIC abseiling instructors shall **strictly adhere** to the standards for set-up and conduct of abseil training outlined in A-CR-050-822/PH-001*, Training Plan Cadet Instructors Cadre Abseil Instructors Course*, trained during the Abseil Instructors Course. Cadets abseiling with a CIC abseiling instructor shall wear both a seat and chest harness.

74. The following abseil qualifications are acceptable:

a. Guide or assistant guide (summer) – Association of Canadian Mountain Guides (ACMG).

b. Instructor – Fédération québécoise de la montagne (FQM).

c. D E L E T E D

d. D E L E T E D

e. CIC abseil instructors course.

f. D E L E T E D

74A. D E L E T E D

74B. D E L E T E D

74C. D E L E T E D

SPECIFIC MOUNTAINEERING SAFETY STANDARDS

NOTE

Cadets must have participated in at least one overnight Class 2 YDS trip prior to being introduced to mountaineering.

INSTRUCTOR QUALIFICATION

75. Mountaineering:

a. As discussed in the description of mountaineering, foot travel in alpine areas (with no ice, glaciers or technical climbing) is considered the bridge between hiking/backpacking and mountaineering, the minimum qualification for CIC officers to lead non-ice/no technical climbing mountaineering activities (also considered alpine backpacking including some Class 3 scrambling/bouldering) is the MOC Land.

b. In addition to qualification at paragraph a., CIC officers must also have at least 10 days of backpacking experience in similar conditions as the ones expected on the expedition.

c. It is recommended that leaders hold the ACMG Backpacking Hiking Guide qualification for Class 3 travel (refer to Chapter 7).

d. All mountaineering activities that include ice and/or glacier travel must have at least one ACMG Alpine Guide; the other instructors must be approved by the ACMG Alpine Guide having demonstrated acceptable skill and experience.

e. All mountaineering activities that include ice/glacier/remote wilderness or technical climbing may only be delivered by ACMG Alpine Guides.

ANNEX A

PROGRESSION MATRIX

Age	Star Level	Intensity of the Activity	Delivery Method	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-18	Green to Gold (Note 1)	Famil	Day Instruction	Up to 5.4	1 to 7	None	Max 15 Min 4	1:4	LHQ/Zone	Local SME Contract With Trade	Detachment/ Region
14-17	Silver to Gold (Note 1)	Basic (Note 2)	Day Instruction	Up to 5.7	1 to 8	Bronze	Max 10 Min 4	1:4	LHQ/Zone	Local SME Contract With Trade	Detachment/ Region
16-17	Gold (Note 1)	Intermediate (Note 3)	Overnight	Up to 5.9	1 to 8	Silver	Max 10 Min 4	1:3	Zone/Region	Local SME Contract With Trade	Detachment/ Region
17-18	NSCE & MC	Advanced (Note 4)	Overnight	Up to 5.10 (Note 5)	1 to 8	Silver	Max 10 Min 4	1:3	Zone/Region	Local SME Contract With Trade	Detachment/ Region/ National

NOTES

1. Gold Star level in this chart includes NSCE and MC unless those levels are separately identified.
2. Climbing instructor may assess a climber's proportional strength and natural ability and authorize the climber to participate in certain levels of climbing.
3. Climbers with excellent skills, strength and experience may attempt any classification of rock climbing one grade above what they have already achieved.
4. Climbers may be introduced to lead and multi-pitch rock climbing at this level – subject to instructor approval. Climbers must be able to climb at least at a 5.7-level prior to being introduced to lead and multi-pitch climbing.
5. Climbers with excellent skills, strength and experience may attempt any classification of rock climbing above 5.10 – subject to instructor approval.

Figure 5A-1 (Sheet 1 of 2) Rock Climbing (Top Rope) Progression Matrix

Rock Climbing Technical Rating

Class 5.0 – 5.4: Novice vertical climb, two hand and two footholds are available for almost every move.

Class 5.5 – 5.6: Some climbing technique is required, four holds may not be obvious.

Class 5.7: At least one move on the climb is missing one hand or foothold.

Class 5.8 – 5.9: Climbing shoes are required because holds are much smaller, good skill and strength is required.

Class 5.10: Excellent skills and strength required, has moves that may only have one good hold.

Class 5.11 – 5.14: Very advanced level of skill and strength required, expert level, with overhang(s) in the later range of this rating (5.13 and up).

Safety Skills

1 Displays good response and behaviour to direction

2 Can use safety equipment properly

3 Can tie into an already established rope system

4 Performs the climber – belayer safety check prior to every climb

5 Can use climbing communication

6 Can activate rescue communications

7 Recognizes danger and backs off

8 Can belay

Figure 5A-1 (Sheet 2 of 2) Rock Climbing (Top Rope) Progression Matrix

Age	Star Level	Intensity of the Activity	Delivery Method	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-18	Green to Gold (Note 1)	Famil	Day Instruction	W2	1 to 7	None	Max 15 Min 4	1:3	LHQ/Zone	Local SME Contract With Trade	Detachment/ Region
14-17	Silver to Gold (Note 1)	Basic (Note 2)	Day Instruction	Up to W3	1 to 8	Bronze	Max 10 Min 4	1:3	LHQ/Zone	Local SME Contract With Trade	Detachment/ Region
16-17	Gold (Note 1)	Intermediate (Note 3)	Day Instruction	Up to W4	1 to 8	Silver	Max 10 Min 4	1:3	Zone/Region	Local SME Contract With Trade	Detachment/ Region
17-18	NSCE & MC	Advanced (Note 4)	Day Instruction	Up to W5	1 to 8	Silver	Max 10 Min 4	1:3	Zone/Region	Local SME Contract With Trade	Detachment/ Region/ National

NOTES

1. Gold Star level in this chart includes NSCE and MC unless those levels are separately identified.
2. Climbing instructor may assess a climber's proportional strength and natural ability and authorize the climber to participate in certain levels of climbing.
3. Cdts and staff with excellent skills, strength and experience may attempt any classification of ice climbing one grade above what they have already achieved.
4. Participants may be introduced to lead and multi-pitch ice climbing at this level – subject to instructor approval.

Figure 5A-2 (Sheet 1 of 2) Ice Climbing (Top Rope) Progression Matrix

Ice Climbing Technical Rating

W is often used to identify the technical grade water ice (waterfall or melt water) in contrast to glacier ice.

W1: A frozen almost horizontal surface, a lake or streambed.

W2: A pitch with short sections of ice up to 80°; many opportunities for protection and good anchors.

W3: Sustained ice up to 80°; the ice is usually good, with places to rest; skill is required to place protection and anchors.

W4: A sustained pitch that is vertical or slightly less than vertical; may have special features such as chandeliers and run-outs between protections.

W5: A long, strenuous pitch; possibly 50 m, 85° to 90° vertical, very few rests stops; shorter pitches may be featureless, good skill at placing protection is required.

W6: At least 50-m pitch, vertical ice; may be of poor quality, very good climbing and protection position skill required.

W7: At least 50-m pitch, vertical or overhanging ice, dangerous stability, extremely difficult pitch physical and mental stress.

W8: Most difficult ice climbing ever done, highly technical and physically demanding.

Safety Skills

1 Displays good response and behaviour to direction.

2 Can use safety equipment properly.

3 Can tie into an already established rope system.

4 Performs the climber – belayer safety check prior to every climb.

5 Can use climbing communication.

6 Can activate rescue communications.

7 Recognizes danger and backs off.

8 Can belay.

Figure 5A-2 (Sheet 2 of 2) Ice Climbing (Top Rope) Progression Matrix

Age	Star Level	Intensity of the Activity	Delivery Method	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-18	Green to Gold (Note 1)	Famil	Day Instruction	Approx 25 ft	1 to 7	None	Max 20	1:1 (Note 2) 1:6 (Note 3)	LHQ/Zone	Local SME Contract With Trade	Detachment/ Region
12-18	Green to Gold (Note 1)	Basic	Day Instruction	Approx 45 ft	1 to 7	None	Max 20	1:1 (Note 2) 1:6 (Note 3)	LHQ/Zone	Local SME Contract With Trade	Detachment/ Region
13-18	Red to Gold (Note 1)	Basic/ Intermediate	Day Instruction	Approx 90 ft	1 to 7	None	Max 20	1:1 (Note 2) 1:6 (Note 3)	LHQ/Zone	Local SME Contract With Trade	Detachment/ Region
16-18	Silver to Gold (Note 1)	Intermediate	Day Instruction/ Overnight	Max 120 ft	1 to 7	None/Bronze	Max 20	1:1 (Note 2) 1:6 (Note 3)	LHQ/Zone/ Region	Local SME Contract With Trade	Detachment/ Region
17-18	NSCE & MC	Advanced	Day Instruction/ Overnight	Multi-pitch	1 to 11	Bronze/Silver/ Gold	Max 20	1:3 (Note 4)	Zone/Region	Local SME Contract With Trade	Detachment/ Region/ National

NOTES

1. Gold Star level in this chart includes NSCE and MC unless those levels are separately identified.

2. **1:1 Ratio.** For any abseil utilizing a **single pitch top belay system** with beginner abseilers, there must be one guide to each abseiling participant.

3. **1:6 Ratio.** For any abseil utilizing a **single pitch top belay system** and where abseilers have provided training/documentations/briefings/verbal evidence supported by a visual check from the instructor/guide, he or she may deem participants to be competent belayers. They may then be permitted to belay with a backup belayer. Where this is the case, the instructor/guide may supervise two independent descent/ropes. Where **single bottom belayers** are to be used, they must be adequately trained and no more than three ropes should be used.

4. **1:3 Ratio. Multi-pitch abseils** are those for which the participants are required to be anchored at changeovers. Where a changeover occurs at an area considered being large/safe and which has easy escape from the ledge, this is considered to be a multiple single pitch abseil. For multi-pitch abseil there must be a minimum of two instructor/guides per multi-pitch comprised of at least one instructor per top of each pitch. Normally the ratio should not exceed three participants to each qualified leader on the cliff. These abseil must be managed carefully to prevent overcrowding at the changeover and to ensure that the anchors are sufficient.

Figure 5A-3 (Sheet 1 of 2) Abseiling Progression Matrix

Safety Skills

1 Displays good response and behaviour to direction.

2 Can use equipment properly.

3 Can tie into an already established rope system.

4 Performs the abseiler – belayer safety check prior to every abseil.

5 Can use climbing/abseil communication.

6 Can activate rescue communications.

7 Recognizes danger and backs off.

8 Can belay.

9 Previous single pitch experience.

10 Previous intermediate single pitch experience.

11 Is aware and understands what action must be taken according to emergency strategy in the event that the instructor/guide becomes injured or incapacitated.

Figure 5A-3 (Sheet 2 of 2) Abseiling Progression Matrix

Age	Star Level	Intensity of the Activity	Delivery Method	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
14-16	Silver to Gold (Note 1)	Basic (Note 2)	Day Trip/ Overnight Trip	No Snow, Ice Glacier or Technical Climbing	1 to 6	Bronze	Max 20 Min 6	1:5	LHQ/Zone	CIC/CIs	Detachment/ Region
15-17	Gold (Note 1)	Intermediate (Note 2)	Overnight Trip	Alpine and Glacier Conditions (Note 3)	1 to 12	Bronze	Max 20 Min 6	1:4	Zone/Regional	Local SME Contract With Trade	Region
16-17	NSCE & MC	Advanced (Note 2)	Wilderness Trip	Alpine and Glacier Conditions (Note 3)	1 to 12	Silver (Note 4)	Max 20 Min 6	1:4	Region/ National	Local SME Contract With Trade	Region/ National
17-18	NSCE & MC	Advanced (Note 2)	Wilderness Trip	Alpine and Glacier Conditions (Note 3)	1 to 12	Silver (Note 4)	Max 20 Min 6	1:4	Region/ National	Local SME Contract With Trade	Region/ National

NOTES

1. Gold Star level in this chart includes NSCE and MC unless those levels are separately identify.
2. Participants must have accomplished at least one overnight trip in Class 2 terrain (YDS) prior to participating in mountaineering activities.
3. Altitude and acclimatization requirements set in limitations.
4. Climbing instructor may assess a climber's proportional strength and natural ability and authorize the climber to participate in certain levels of climbing.

Figure 5A-4 (Sheet 1 of 2) Mountaineering and Glacier Progression Matrix

Safety Skills

1 Displays good response and behaviour to direction.

2 Can use safety equipment properly.

3 Can tie into an already established rope system and performs the climber – belayer safety check prior to every climb.

4 Can use climbing communication.

5 Recognizes danger and backs off.

6 Can belay.

7 Has participated in crevasse rescue training.

8 Has been trained to self-arrest.

9 Can activate and assist in a rescue.

10 Has participated in avalanche training including recognizing avalanche paths, zone of hazards and safety zones.

11 Can use a probe – function as part of an avalanche rescue team.

12 Can use and test avalanche transceiver.

Figure 5A-4 (Sheet 2 of 2) Mountaineering and Glacier Progression Matrix

ANNEX B

SPOTTING

GENERAL

1. Spotting is one of the safety systems used in climbing activities that take place low to the ground such as bouldering, low elements of ropes/challenge courses and initiative games. Instead of using ropes to hold up the weight of the climber, a person below helps support and directs the climber's head, face, neck and spine away from danger in case of a fall. Although when a climber is falling, he will call for somebody to "catch" him, the mechanism is much more one of absorbing and re-directing towards somewhere safe (except in activities such as the trust fall!).

2. In preparation for one of these activities, obstacles that can, should be removed and replaced prior to leaving the site (rocks, branches or kit bags). Other obstacles such as protruding boulders and tree roots should be padded using a portable mat. In order to increase site awareness, climber and spotters should make a mental note of the location of obstacles that cannot be cleared away.

SPOTTING PRINCIPLES

3. Instructors shall ensure that all participants are briefed on the following spotting principles:

   a. Climber's head must never be below the feet, this way if they fall, the lower portion of the body will touch the ground first, absorbing some of the impact.

   b. Spotters must be ready to act and be proactive with their body position, anticipating the possibility of a fall, focusing on the task.

   c. Spotters must stay close to the participants, the less time the body spends "falling", the less load there is to be absorbed.

   d. Often climbers will avoid a fall by being pushed back into position by the spotter.

   e. When the climber is ready, he explains what he will do on the climb, the route he will take and expected difficulties.

   f. Climber to spotter weight ratio is important, people should be matched for size as much as possible.

   g. If the climber has more than one spotter, they must agree on who will do what prior to the climber getting off the ground.

SPOTTING COMMUNICATION

4. Each climber has his own assigned spotter(s). They communicate using a pre-determined response dialogue such as the one below:

   a. Climber asks: "Spotter(s) ready?".

   b. Spotter(s) respond: "Ready".

   c. Climber: "Climbing".

   d. Climber: "Watch me" – (meaning – this is an especially difficult move).

   e. Spotter(s): "Watching" – (meaning – we were watching you all along but now we know we have to be extra alert, we have moved in close and are ready to catch you).

   f. Climber: "Falling".

g. Spotter(s): “Fall” – (meaning – we’ve got you).

h. Climber: “Coming down”.

i. Spotter: “Watching”.

SPOTTING SKILLS

5. Instructors shall demonstrate, have spotters practice, and shall monitor the following spotters skills:

a. Feet are shoulder width apart, one foot slightly in front of the other.

b. Hands are up and out (ready to grasp centre of gravity – from waist to rib cage) mirroring to movements of the climber.

c. Transfer weight to the ball of the feet especially on the forward leg, leaning slightly forward.

d. Head retracted back to avoid getting hit by flailing arms and hands.

e. Watch centre of gravity, not hands and feet.

f. Fingers together, thumbs in, hands cupped using the palm to catch/support.

g. If climber looses one or two holds but is still on the climb, a push on the shoulder blade (or thigh) will usually give support and allow the climber to regain proper footing or holds.

h. If climber is falling feet first, grab by the hips and slow down the fall.

i. If climber is falling at an angle, grab under the arms and steer the shoulders to a good landing spot, preferably where the crash pad was positioned, head and neck will follow – remember your No. 1 priority – head, face, neck and spine.

ANNEX C

RIVER CROSSINGS

1. Depending on the season, trails and backcountry backpacking/mountaineering activities can come across small waterways and there may be a need to cross rivers. Ultimately, there is always the choice not to cross, find another way or turn back if the conditions are too dangerous. **During hiking and backpacking activities, CCM members may cross creeks up to 30 cm (1 ft) deep if the following conditions are met**:

a. Water temperature minimum of 5°C.

b. If river is frozen, refer to ice safety at Annex D.

c. Participants can see the bottom.

d. No great current.

e. Footing looks secure (no great holes, slick slippery surfaces, tumbling river debris).

f. No strainers or sweepers downstream.

g. Use footwear. Because wet footwear can quickly lead to blisters, there must be a plan in place to avoid hiking with wet boots (change of socks, plastic bags, change of footwear).

h. D E L E T E D

CROSSING RIVERS DEEPER THAN 30 cm AS PART OF MOUNTAINEERING

2. **Scout the Area Properly**

a. It may be necessary to get to higher ground in order to survey large sections of the river.

b. It may be necessary to travel far up or downstream in order to find an appropriate river crossing.

c. Consider travelling upstream and crossing tributaries since they should each have less flow than collecting waterways.

d. Melting north facing glacier streams may not flood as mush as south/sun facing slopes.

e. Maps can help you identify gradient, and approximate width of rivers and creeks.

f. The group needs to assess “what will happen if one or more of us washout?” does it mean wet boots, a twisted ankle, loss of equipment or worse.

g. Some participants may have to help others by shuttling packs, and holding each other to get across, everybody needs to be comfortable with the level of challenge.

3. **Dry River Crossings.** Crossing on logs, fallen trees, rocks or other natural bridge across waterways in an attempt to keep dry is considered dry crossing. Because there is a potential for staying dry, some people attempt dry crossings in situations where their judgment would keep them out of the water at a wet crossing. Also because height is often a factor in dry river crossing attempts, falling-in is usually much more dangerous than wading in. Most times, the natural bridge itself can be the greatest source of danger since it quickly becomes a strainer when people fall upstream:

a. Logjams and beaver dams have been known to hold up the weight of horses and their riders but most often they are not so stable. Often, logjams and beaver dams are held up by a few critical pieces of wood and if those logs are displaced in the crossing, the logjam can no longer hold up the pressure of the water pushing against it. Logjams have been known to open like floodgates. Swimming with river debris and sudden currents can be very hazardous.

b. One person without their pack, holding on to a rescue rope should test any natural bridge, if it shifts, sinks or deforms under the weight, find another way. Often the calm eddy downstream of the logjams can be crossed, although it will be wet, it is usually more secure.

c. Snow and ice bridges are severely weakened in the spring especially during sunny days, the snow or ice melted over the course of a few hours can be critical. These bridges must be probed and safety lines must be used if instructors suspect any danger (refer to ice safety at Annex D).

d. Rock hopping may be possible especially if rocks are fairly flat, clean and close together, unfortunately a slip from rock hopping usually end up getting the hiker wet and may leave an impact wound, many fractures are attributed to an attempt to remain dry.

4. **Wet River Crossings.** Most paddlers will attest that water usually behaves predictably and it is important to remember some principles when wading through rivers or creeks:

a. At a constant gradient, narrow channels have faster water.

b. The deeper the water, the slower the current must be to wade in.

c. Consider the downstream hazards in case of a washout, i.e. rapids, waterfalls and strainers.

d. Spring floods increase the water level burying dangerous obstacles creating strainers.

e. Look for entrance and exit points where the banks have not undercut, or slippery slopes.

f. Crossing at a diagonal angle, allowing for some downstream travel will decrease the amount of work you will have to do against the current.

g. In mountain streams, water levels rise in the afternoon after the sun has melted snow feeding into the stream.

5. **River Crossing Skills**

a. Pack belts must be untied as per the shallow water crossing safety standards seen in hiking.

b. Ensure backpacks are compact and not top heavy, make sure there is nothing dangling around your neck.

c. Keep your feet shoulder width apart, face upstream and lean into the current.

d. Remove clothing that will increase drag, i.e. wind pants.

e. Keep your hands free or use a stick to made a tripod.

f. Learn the techniques and the advantages of the tripod and group crossings.

g. Have the largest, most experienced, strongest person lead out into the current, create mobile eddies for small, unstable or injured hikers.

h. Post spotters with rescue ropes downstream.

i. Practice on dry land or shallow water first.

j. Only wade in up to mid thigh in currents.

k. Only wade up to waist in very slow currents.

l. All participants must know the following immediate action if they washout:

(1) Ditch the pack.

(2) Face downstream, floating on the back with feet pointed downstream and up in front of you and back paddle with arms (river swimming position).

(3) Point the shoulder to the shore you want to go (closest shore) and paddle hard to get yourself out of the water ASAP.

(4) Use the safety rope.

(5) All other participants get out of the water and assist the washout person, track the pack if possible.

ANNEX D

ICE SAFETY

1. Fresh water ice safety is an important aspect of mountaineering. The information below has been gathered from The Treasury Board of Canada, *Safety Guide for Operation Over Ice*, and The Lifesaving Society, *Ice Myths and Cold Realities and Ice: The Winter Killer*.

a. Not all ice has the same strength – blue, clear or dark ice is the strongest, white opaque ice (that has snow or oxygen bubbles entrapped) is considered half as strong (therefore must be twice a thick to support the same weight).

b. Do not assume ice is the same thickness throughout a frozen surface – it takes longer for the middle of a river to freeze than the edges.

c. The current of a river will also affect the ice thickness, the stronger the current (e.g. in the middle compared to the edges), the thinner the ice.

d. Heavy snow covers insulates the ice, reducing its growth, i.e. expected thickness.

e. Ice must be supported by water in order to be strong, if water level has dropped under the ice, it has much less load bearing strength.

f. Weight spread out is easier to bear than single spot heavy loads.

g. On ice, stationary loads require thicker ice that a load in motion.

h. Moving vehicles on ice create a wave (like a boat wake) under the ice, the vibration and the pocket of air under the ice make much more vulnerable to break through.

i. Cracks may or may not affect the ice strength.

j. Spring ice conditions are always suspect.

2. **Minimum Required Thickness for Load Bearing Using Good Clear Ice**

a. One to three people walking: 10 cm (4 inches).

b. Snowmobile (or five people standing together): 15 cm (6 inches).

c. Car (or 15 people standing together): 20 cm (8 inches).

ANNEX E

CLIMBING CODE[1]

1. A climbing party of three is the minimum, unless adequate prearranged support is available. On glaciers, a minimum of two-rope teams is necessary.

2. Rope up on all exposed places and for all glacier travel. Anchor all belays.

3. Keep the party together, and obey the leader or majority rule.

4. Never climb beyond your ability and knowledge.

5. Never let judgment be overruled by desire when choosing the route or deciding whether to turn back.

6. Carry the necessary clothing, food and equipment at all times.

7. Leave the trip itinerary with a responsible person.

8. Follow the precepts of sound mountaineering as set forth in textbooks of recognized merit.

9. Behave at all times in a manner that reflects favourably upon mountaineering, with minimum impact to the environment.

1 Reprinted with the permission of the publisher from *Mountaineering: The Freedom of the Hills*. 6th ed. Don Graydon and Kurt Hanson (Eds), Seattle, WA: The Mountaineers, 1997.

ANNEX F

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CHAPTER 6

CROSS-COUNTRY SKIING

DESCRIPTION OF ACTIVITY

1. Cross-country skiing is an ancient sport that has been popular for centuries. The origins of the sport can be traced to the northern regions of the earth, mainly in Scandinavian countries. Cross-country skiing (also called Nordic skiing) involves a wide variety of types and styles; from classic to skate skiing, as well as backcountry skiing. There are other sports that involve Nordic skiing, such as biathlon and Nordic combined (ski jumping and Nordic skiing). There are many places in Canada that are conducive to cross-country skiing – every province and territory in Canada has their own association for cross-country skiing. Basically, all that is needed to try this sport is a good base of snow and a little will power. Skiing on groomed trails is a relatively safe activity, as the trails are patrolled regularly by ski patrols that are run by each individual ski centre. The usual safety precautions for cold weather are required, such as prevention of frostbite and hypothermia. Depending on the trail system and fitness of the participants, cross-country skiing can be a very demanding activity, so ensuring that each cadet is of reasonable good health is important. The beauty of this activity is that it can basically be adapted for anyone.

2. For our purposes, proficiency and training levels have been divided into three categories to facilitate learning and success by all participants:

a. **Level 1 – Beginner.** Participants should become familiar with all types of equipment, be able to choose correct sizing, have a basic knowledge of the principles of skiing technique, and be able to perform these basic techniques (usually year one starting the sport).

b. **Level 2 – Intermediate.** Participants should have mastered basic skiing techniques, and are now ready to apply them to more challenging terrain. Different types of skiing should also be taught at this level, i.e. back country skiing, advanced skating/diagonal techniques, etc. (usually years two and three of the sport, depending on muscle growth and strength requirements, i.e. age).

c. **Level 3 – Advanced.** Participants have a good working knowledge of all skiing techniques, have had experience on all types of terrain, and have the ability to achieve longer distance intervals. At this stage, the participant could try to enter local competitions, and be able to follow a simple training plan.

AIM OF ACTIVITY

3. The purpose of cross-country skiing in the CCM is to continue and promote the development of physical fitness (as it is stated in the aims of our movement), and to empower young skiers to try new and different techniques. The benefits of regular cardiovascular exercise have been proven by countless researchers. Cross-country skiing is one component of biathlon. Participation by the maximum number of cadets is a very attainable goal for this sport, as it is possible for all cadets to participate at their own level.

CANADIAN REGULATIONS CONCERNING SPECIFIC ACTIVITIES

4. Cross-country ski trails can be found (and are abundant) throughout all of Canada. Each club or organization usually asks for a nominal fee for a day pass. The terms and conditions (liability) are printed on the back of the pass. However, it is possible to use just about any area where snow is found, as long as the permission of the landowner is granted.

CCM SAFETY REGULATIONS

5. All safety regulations regarding cold weather activities must be regarded. Refer to CATOs 13-12 and 24-01 and regional orders.

AUTHORITY LEVEL

6. Authority must be granted by the Commanding Officer of the cadet unit, as well as the cadet detachment.

GOVERNING BODIES

7. Recognized cross-country ski associations:

a. **International**

(1) FIS Headquarters
Marc Hodler House
Blochstrasse 2
CH – 3653 Oberhofen/Thunersie
Switzerland
Telephone: +41(33) 244 6161
Email: mail@fisski.ch

b. **National**

(1) Cross-country Canada
Bill Warren Training Centre
1995 Olympic Way, Suite 100
Canmore, AB T1W 2T6
Telephone: 403-678-6791
Email: info@cccski.com

c. **Provincial/Territorial**

(1) Northwest Territories Ski Division
c/o Ms Jonny Graves
P.O. Box 1268
Yellowknife, NWT X1A 2N9
Telephone (res): 867-873-5373
Email: jonny@cbaexp.com

(2) Cross-country Yukon
P.O. Box 4507
Whitehorse, YK Y1A 2R8
Telephone: 867-633-8420
Fax: 867-667-4237
Email: XCYukon@yt.sympatico.ca

(3) Cross-country British Columbia
106 – 3003 30th Street
Vernon, BC V1T 9J5
Telephone: 250-545-9600
Fax: 250-545-9614
Email: CCBC@Junction.net

(4) Cross-country Alberta
11759 Groat Road
Edmonton, AB T5M 3K6
Telephone: 780-415-1738
Fax: 780-427-0524
Email: cca@xcountry.sport.ab.c

(5) Cross-country Saskatchewan
1860 Lorne Street
Regina, SK S4P 2L7
Telephone: 306-780-9236
Fax: 306-781-6021
Email: ccs@sk.sympatico.ca

(6) Cross-country Ski Association of Manitoba
200 Main Street
Winnipeg, MB R3C 4M2
Telephone: 204-925-5639
Fax: 204-925-5624
Email: CCSAM@Pangea.ca

(7) Cross-country Ontario
c/o Maureen Kershaw
120 Roxborough Dr.
Sudbury, ON P3E 1J7
Telephone: 705-674-4741
Fax: 705-674-3513
Email: mkershaw@cyberbeach.net
Lake Superior Ski Division: North Western Ontario

(8) Ski de fond Québec
4545 Pierre-de-Coubertin Avenue
P.O. Box 1000, Succ. M
Montréal, QC H1V 3R2
Telephone: 514-252-3089
Fax: 514-254-1499
Email: barrettes@videotron.ca

(9) Cross-country New Brunswick
P.O. Box 20012
Bathurst, NB E2A 4V7
Telephone: 506-546-3525
Fax: 506-548-8531
Email: xski-nb@direction-lr.com

(10) Cross-country Ski Nova Scotia
P.O. Box 3010S
Halifax, NS B3J 3G6
Telephone: 902-425-5450
Fax: 902-425-5606
Email: canoens@sportns.ns.ca

(11) Cross-country P.E.I.
P.O. Box 302
Charlottetown, PE C1A 7K7
Email: mazer@upei.ca

(12) Newfoundland & Labrador Ski Division
Gerry Rideout
301 Curtis Cresc.
Labrador City, NF A2V 2B8
Telephone (res): 709-944-2154
Email: rideoutg@cancom.net

8. Rules and regulations for competitive race/tour differ according to the provincial/territorial laws and liabilities. Costs and insurance/waivers may depend solely on specific ski centres. International rules and regulations for elite racing are available on the Website for the International Ski Federation, mail@fisski.ch. Canada's rules and regulations are based upon these same governing rules.

9. Note there are no rules and regulations for recreational cross-country skiing.

EQUIPMENT REQUIREMENTS

10. Equipment for each participant:

a. **Ski Boots.** There are various types of ski boots available for various types of skiing. Boots fit the cadet's shoe size.

(1) **Classical (Also Called Diagonal).** Shoe-like boot is used. No ankle support is needed due to the movement of the body while skiing. There are bindings usually found under the toe of the boot, which MUST match the bindings on the ski (be careful, many different types of bindings and boots have been developed!). The most popular binding is the SNS binding, which looks like a metal pin that is placed under the toe of the boot.

(2) **Skate Skiing (Also Called Freestyle).** Larger, ankle supporting boot is used, since the ankles need support due to the style of skiing. For beginners, a firmer ankle support is desirable to facilitate easier learning. The straps on the boots and the laces will vary, some with Velcro straps and some with plastic clips. Again, it is very important to pay attention to the type of binding and boot. They MUST match. The most popular types are the SNS bindings and the Pilot bindings and boots.

(3) **Backcountry Skiing.** Boot is a bit of a mix between the other two types (has stiff support but allows the ankle to bend). A much heavier boot in comparison to the others, more rugged to withstand the terrain of open spots of land. It is important that the binding match the ski.

b. **Skis**

(1) **Classical (Diagonal) Skis.** Usually longer than skate skis, about 30 cm longer than the individual, according to the NCCP Level 1 technical handbook. Classical skis have a raised and pointed tip (to help plow through snow in the track). The same width as skate skis (about 6 cm), although the binding is placed specifically for classical skiing (done by the ski shop). There are variations, but generally they are made of hollow fibreglass, very light and easy to manoeuvre.

(2) **Skate (Freestyle) Skis.** Shorter than classical skis, the ski should be no longer than 15 cm longer than the individual. For beginners, a shorter ski is desirable as it is easier to practice. Advanced skiers prefer a longer ski because it increases the gliding time of the ski. Tips are rounded and the binding is mounted specifically for skate skiing. Ski width is similar to classical skis (about 6 cm). Generally they are made of hollow fibreglass, very light and easy to manoeuvre.

(3) **Back Country Skis.** Same length as classical skis, but much heavier, sturdier and stiffer than classical or skate skis. This is needed when the terrain is considered. Bindings are usually metal and very strong. Wider than skate or classical skis (about 10 cm) in width. Many variations on composition but are usually made with heavier fibreglass, wood, and often have metal edges.

c. **Poles.** For classic and backcountry skiing, the poles should fit snugly under the armpit when their tip is on the floor. For skate skiing, the pole should reach the upper lip (NCCP Level 1 technical handbook, 1987). There are many different types of poles available, the lighter the pole the more expensive it is and the more energy you will save.

RECOMMENDED EQUIPMENT LIST

11. **Clothing.** Clothing for each type of skiing depends on the experience and skill level of the participant. Generally, a good rule is to dress in layered clothing, so that a layer can easily be removed if desired. The more novice a skier is, the more and warmer the clothing needed, depending on the weather. Advanced cross-country skiers (racers) can wear conformed Lycra suits, which enable full range of movement and reduce unnecessary weight on the skier. In backcountry skiing, it is probable that the skier will be out for an extended amount of time, and the speed of skiing is reduced. Therefore, warmer, bulkier clothing is required. It is desirable to have a water bottle or water supply near to enable adequate hydration.

12. **Ski Wax.** There are various waxes used to treat the bottom of the ski (the surface that glides on the snow). Generally, there is a correct wax for each snow temperature. The warmer the snow, the warmer and softer the wax to be used. Each type of skiing requires a different wax, as the mechanics of each type are different.

a. **Classical/Diagonal/Backcountry Skiing.** Two types of wax are used on the ski: grip wax and glide wax. The base of the ski should be clean (wax remover may be used) and free of any major gouges or damage (ski shops can stone grind the bases if they are in bad shape). Glide wax is applied to the length of the ski. Grip wax is then applied to the section in the middle of the ski where the binding is. Grip wax is corked in and then the ski is ready for use. The reason for the two waxes is because the classic skier stays in the groomed track for the duration of the ski time. In order to get up hills and to get a good kick, a good grip is needed.

b. **Skate/Freestyle Skiing.** Glide wax is all that is needed. Generally, the cleaner and shinier the ski, the faster it is. There are many types or grades to glider wax, the higher the fluorocarbon content, the faster the wax (and the more expensive!).

c. **Waxing Equipment.** To properly wax skis, the following equipment is needed:

(1) wax remover;

(2) fibrolene cloth;

(3) Fibertex;

(4) P-tex candles;

(5) waxing iron;

(6) waxing form;

(7) plastic scrapers;

(8) wax;

(9) nylon brush;

(10) horsehair brush;

(11) synthetic cork; and

(12) snow thermometer.

13. Applying wax: clean the ski with wax remover and wipe with fibrolene. Use Fibertex to rub on the surface and remove any oxidization spots. Apply glide wax by melting it on the ski using the iron. The iron is placed on the ski, and the wax is melted over the entire surface of the ski. Caution is needed! Only use the iron to melt the wax, heating the base too much or for too long can cause damage to the ski. Stop immediately if the iron starts to smoke! That means that it's too hot. After letting the bases cool to room temperature, scrape the ski from the TIP TO THE END (the same way that you would glide) using the plastic scraper. Scraping the other way will make a slow ski. Scraping off the excess wax will expose the ski base, as the wax is absorbed through tiny pores in the ski base surface. After scraping, buffing with first the nylon brush, then the horsehair or synthetic brush will make the base shiny and slippery. Perfect to ski on! The ski is now ready for use by the freestyle/skate skier. The same process is needed for the classic/backcountry ski, but a layer of grip wax is applied to the section underneath where the binding lies by crayoning it on (the wax comes in a big crayon shape). The grip wax is then rubbed vigorously with the synthetic cork to be absorbed. Now the classic/backcountry skier is ready to go! Wax should be applied every time there is a major temperature change, when the ski becomes dirty, or when white patches develop. The white patches are from oxidization, and can be rubbed off with Fibertex.

WAX TEMPERATURE CHART			
Temperature	**Glide Wax**	**Grip Wax**	**Snow Conditions**
-15 and Colder	Green	Green	Fresh/Old, Snow, Granular
-10 to -15	Blue	Blue	Fine Grained, Old/New Snow
-5 to -10	Purple	Blue	New/Old Snow
0 to -5	Red	Purple	New/Old Snow
+5 to 0	Yellow	Red, Yellow	New/Old Snow
-15 and Colder	Graphite		Old, Grained Snow, Low Humidity
Any Temperature	High Fluoro		Dirty Snow

14. Remember that you are waxing for the SNOW temperature, not the air temperature. Generally, if the humidity is higher, the warmer the wax will be. A good test is to grab some snow and try to make a snowball out of it. If it makes a nice snowball, the humidity is generally higher. If the snow is very dirty, waxing often is a good idea to keep the ski base in good condition.

■ RATION REQUIREMENTS

15. Usually there are no open spaces where open fires are allowed on regulated and privately owned trails. Food must be brought with each individual, so lightweight but high-energy snacks are the best choice. Granola, dried fruit, and cereal bars are a good choice.

16. Plenty of liquids are necessary for cross-country skiing. It is very important to rehydrate often, and participants should be reminded of this. Hot liquids are also highly beneficial, as they can warm up anyone who becomes cold.

17. It is important that a greater than normal amount of food be consumed by each participant, since the energy output will be higher.

TRANSPORTATION REQUIREMENTS

18. Access to and from the ski centre or training area is open to the public.

19. A safety vehicle will be fuelled and present at the closest vehicle access point. The vehicle must be able to carry any casualty that must be evacuated on a spine board.

SAFETY PRECAUTIONS/GENERAL RULES FOR CROSS-COUNTRY SKIING

20. Cadets and staff need to be briefed with a safety briefing, consisting of the following:

a. frostbite, hypothermia, dehydration prevention;

b. using the buddy system;

c. staying on groomed and marked trails only (if skiing at a private or public ski centre);

d. RV time at the end of the activity so that everyone is accounted for; and

e. instructions to get help from the ski patrol if needed.

21. Cadets and staff need to ensure that they know that all equipment functions properly.

22. It is important to let staff know the universal sign for passing an individual on an open trail. If one wants to overtake (or pass) another on the trail, he or she will call out, “Track.” It is the responsibility of the person being overtaken to veer over to the right side of the trail wait until the other skier has passed.

SPECIAL SAFETY CONSIDERATIONS FOR BACKCOUNTRY SKIING

23. Unlike cross-country skiing on groomed trails, backcountry skiing will sometimes be done on some rough terrain and difficult snow. Since there may be many different layers in the snow, it is important to practice first on good, hard packed snow before trying to break your own trails and skiing in the deep snow. The leader of the group will have the hardest time when backcountry skiing, as he or she is the one who has to break the trail first through the snow. The others that follow will have a much easier time due to the efforts of the leader. Make sure that everyone takes turns being the first to break the trail, as it can be exhausting.

24. Backcountry skiing can be difficult at times, as some terrain may be quite hilly and require a lot of strength and skill to climb. It is important to ensure that any mountainous area is well researched. It is dangerous to try and ski a slope above 30°. There is a real danger of avalanches at these increased slopes. As well as the slope, ensure that the stability of the snow has been tested (the layers are sturdy enough to travel on). You can inquire at your local natural resources or ranger station for the information.

25. While skiing with a group, it is important that the group stay together at all times. Watching out for each other and making sure that everyone is warm and comfortable is important. A first aid kit (bandages, gloves, antibacterial cream, splints, etc.) and winter emergency kit should be brought with the group. It is important that the emergency kit carry the following:

a. tin can (for melting snow/water);

b. lighters/matches;

c. down parka;

d. pocket knife;

e. candles;

f. Thermarest pad;

g. fire starter, i.e. dryer lint; and

h. space blanket.

26. If planning an overnight winter camping experience, the usual safety precautions for outdoor winter camping apply. Packs may be worn to carry equipment, but make sure that each person is carrying no more than one fifth of his or her weight. Packs with internal frames are better to use, as they keep the load closer to the body. Keep in mind that it is much more difficult to ski with a pack on (it throws off your centre of balance), so it is a good idea to have a few practice sessions before heading out on an overnight backcountry skiing trip. Sleds may be very beneficial, as it is easier to carry heavier loads when they are sliding. Be careful when going up or down hills with a sled to ensure that it is under control.

27. Remember that when camping outdoors in the winter and backcountry skiing, it is important to ingest enough calories to keep the body functioning properly. A good plan is to make sure that each participant eats about 3700 to 4500 calories per day, to keep the body's internal furnace working. In the cold the body must compensate to keep warm, and it makes us burn up more calories than if we were inside.

28. Mountain touring may well be the ultimate ski experience! The biggest assets of mountain skiing, however, are also its biggest liabilities: great vistas (hence steep slope gradient), good snow (hence risk by virtue of isolation and lack of facilities). As with driving an automobile, a key factor in enjoying mountain ski touring is to eliminate liability by properly assessing and eliminating risks.

CADET SKILL LEVEL AND PROGRESSION

29. The traditional approach of cross-country skiing organization is to develop well-rounded skiers in every individual. Cross-country skiing participants may not wish to be completely versed in every style of cross-country skiing but it is recommend they at least complete a well-rounded familiarization. In order to become qualified instructors with either Cross-Country Canada (NCCP coaching levels) or CANSI, instructors will have to be able to perform and teach all the styles and components below. At Annex A, refer to the progression matrix.

30. **Familiarization.** Getting the equipment on is the first big hurdle. Remembering it is important that ski bindings match the ski boots being used.

31. Warming up is extremely important, regardless of the level of the athlete. Warming up involves slow stretching from head to toe, and then movement on the skis. Jumping from side to side with the skis on, jumping jacks, and stepping to turn a full circle are excellent warm up drills. Balancing drills are also good to use in a warm up, since balance is one of the major skills needed to ski successfully. Balancing on one ski while bending the knee, holding the ski (one leg at a time) at different heights are good exercises (adapted from *The Instructor's Manual for Teaching Nordic Skiing*, 1994). After this step, cadets must be evaluated to ensure that they are placed in the correct learning level.

32. **Beginner**

a. After becoming familiar with the equipment and safety rules, the beginner should practice the balancing exercises that are listed above in the warm up stage, and learn first the correct procedure to get back up after a fall. When lying on the ground (regardless of position), have participants lie on their backs, put their legs (and skis) together and parallel, and getup by rolling on to their sides. Trying to stand back up on your feet is very tricky any other way. As well as going up the hill, the participant must be taught a safe way to go down a hill, using a snowplowing action. Pushing the outside of the ski and bringing the tips together will slow down momentum while going down a hill and give the skier control over his or her skis.

b. **Classical/Backcountry.** The diagonal stride is taught first, which resembles the rhythmic action of walking. Striding and weight transfer are the basis of all classic skiing movements (adapted from *The Instructor's Manual for Teaching Nordic Skiing*, 1994). Trying the movement (opposite leg, opposite arm with a weight transfer in between) without poles first is a good idea. The next progression would be to teach double poling. This technique is rather simple; it involves keeping the skis in the tracks and using simultaneous arm action (poling) only to propel the body forward. Once the participant is comfortable with that, teaching the herringbone to get up hills is the next progression. With the skis pointed outward, stepping up the hill one step (ski) at a time with the opposite arm, opposite leg technique.

c. **Skating.** The free skate is taught first, and it resembles ice-skating. The longer the glide and the better the balance of the skier, the better skier he or she will be. It is important that the skier not try to use his or her poles, only holding them for balance. The diagonal skate comes next, which has been nicknamed "the duck walk." It is an easier method to getting up a hill, and involves a herringbone method (as in classical skiing) with a push from the opposite pole to the opposite ski. After the skier is comfortable with the first two techniques, the offset skate is taught. This is a two-skate method, used for climbing hills. It involves planting one ski and two poles at the same time, to push the remaining ski up the hill.

33. **Intermediate**

a. **Classic/Backcountry.** The next progression is to teach one-step double poling. It involves the same action as double poling, but a kick or step is added into the power phase. It is much faster than double poling. The next stage would be to teach the uphill diagonal stride. This involves the same diagonal stride as in the beginner's phase, but with a much refined weight transfer, and a quicker, shorter movement in order to get up the hill.

b. **Skating.** The one skate and two skate come next on the progression scale. This involves the pole planting at the right intervals in order to help facilitate forward momentum. Once these are mastered, the marathon skate is an easy progression, because it involves keeping one ski in the classical track and pushing with the remaining ski.

34. **Advanced**

a. **Classic/Backcountry.** Once each technique is taught, it must be practiced regularly. The advanced skier should be able to perform all techniques, as well as be able to perform these techniques for longer intervals. This stage would be where the participant could enter races and strive to meet his or her goals for specific times. A training schedule may be followed, and the skier should be able to correct small faults in technique and improve with practice.

b. **Skating.** The last progression is the skating turn, which involves a high speed turn when skiing down a hill. The skier must be advanced and confident in order to perform this progression. After he or she is able to perform all techniques, he or she should practice by performing these techniques for longer intervals. As well, racing experience is encouraged and a training schedule may be followed. Techniques should be practiced to correct any minor errors.

PHYSICAL FITNESS

35. Any cadet who is willing to try can participate in this activity. It is recommended (as with any cardiovascular exercise) that each participant be in good physical health. The more experienced and technically sound the athlete, the longer intervals for ski time can be tolerated.

QUALIFICATION PROGRAMS

36. The Jackrabbit Program (affiliated with Cross-country Canada) is available at most ski centres, and is run locally by volunteers who have taken a local leader's course. Children who participate are between the ages of 4 to about 16 years. The program is divided into proficiency badges, with colours for each proficiency level. There are also distance challenge badges, and racing badges that are attainable.

37. The Junior Development Program (affiliated with Cross-country Canada) usually follows the Jackrabbit Program, and is aimed at those young people who want to increase their knowledge about racing and wish to ski competitively. Certified Cross-country Canada coaches normally run the program.

38. NCCP Coaching Program is run by Cross-country Canada, and is available to anyone who is 16 years of age or older, has some skiing experience, and an interest in the course (NCCP manual, CCC Level 1 Technical, 1987).

QUALIFICATIONS, EXPERIENCE AND FITNESS OF LEADERS AND OPI

39. It is necessary to have an instructor with experience at cross-country skiing, and who is able to teach at the level of the cadets. Of course, the instructor must be able to teach all types of technique, so he or she must be in fairly good physical condition. If the instructor has coaching experience or Jackrabbit leadership experience, it will be easier for him or her to show the progression of each technique.

40. Medical/first aid qualified staff are mandatory as with any cadet activity. It is important that at least two instructors are advanced enough skier so that they can respond to any emergency if ski patrol personnel are not available.

41. The OPI must be an adult, CIC, CI, or SME, and be familiar with the safety rules and protocols of the CCM.

42. The following are the recommended instructor to cadet ratios. Instructors may be older, experienced cadets, as long as they are supervised by a CIC, CI, or SME who is an adult:

a. beginner – 1:10;

b. intermediate – 1:15; and

c. advanced – 1:10.

43. It is important that skiers always stay in groups of at least two. There may be times when skiers are left on their own to practice their technique, so they must be in pairs. There really is no limit of skiers in a given day, as long as there are sufficient staffs and the facility is large enough to accommodate the group.

REQUIRED PREPARATORY WORK

44. **Required Recces.** It is important that the facility or land that will be used is visited. There are numerous cross-country races and different events that happen throughout the ski season, and it is advisable that large events are avoided for beginner and intermediate skiers. Oftentimes trails can be closed to the public due to a large ski race. It is also a good idea to approach the manager or owner of the facility and let him or her know that you are planning to bring a group for some practice. He or she may have some specific times that would be best for your group, and you may even get a deal on the price of a day pass per cadet!

45. The emergency plan must contain contact information and the following details:

a. contact information to EMS;

b. phone number, medical number, emergency contact number, any special relevant medical details for each participant;

c. who the first aid qualified personnel are; and

d. how any first aid situations will be handled.

TIME OF DAY/YEAR REGULATIONS

46. Skiing is mostly done during the day; however some facilities have lit trails at night and have convenient hours. Since there is not much daylight, if it is desirable to have an evening practice, it is possible to do so. Normally (and depending on what part of the country you wish to participate), ski trails are accessible from about mid-November to late March. It is not advisable to ski until there is a sufficient base of snow, as it will damage the bases of the skis. Only ski under light conditions.

DURATION OF THE ACTIVITY

47. For beginners, usually a 15- to 20-minute lesson with a 15- to 20-minute practice time is enough. For intermediate skiers, a shorter duration of the lesson but a longer practice session is good. For advanced skiers, a short lesson with a long practice period is sufficient. Unless on a day trip (as is the case with backcountry skiing), the longest that is advisable to have a practice is two hours. Use the first 15 to 20 minutes for the lesson, and the rest of that hour for the practice. It's good to have an indoor break in between, for re-hydrating and warming up. For advanced skiers, an hour workout is quite a lot, they should be able to ski about 15 km in that time. Ensure that they are not overdoing their training. All recommended durations of this activity are related to the weather – keep a close eye on the group and be sensitive to their temperature. There are plenty of things to go over inside while they warm up, i.e. a waxing session, etc.

ENVIRONMENTAL CONSIDERATIONS

48. As with any activity, cadets are expected to respect the environment, and leave no trace of where they have been training. No cadet should deviate from a marked trail, or tear away any branches or leaves while passing by. Public washroom facilities are available at most skiing facilities, and if not, a port-a-potty or some other measure must be used. No waste will be left anywhere on any trail.

WEATHER CONSIDERATIONS/ABSOLUTE STOP CONDITIONS

49. Since skiing is done in the winter, it is important to consider the weather and all the elements that may make it difficult to have a lesson or practice session. Heavy snowfall or wind, low temperatures, darkness, low visibility or even wet snow or warm temperatures can make for miserable skiing. **Using good judgment when considering the weather is important.**

50. If the temperature falls **below -20°C** (with the wind-chill factor calculated in), cadets must be brought inside. It is dangerous to be skiing if it is below this temperature. These are rules set out by the Cross-country Canada and Biathlon Canada Race schedules.

RISK ASSESSMENT AND MANAGEMENT

51. This chapter has clearly identified some very specific guidelines and safety considerations to be included in every level of risk managements. The following list of factors is not exhaustive:

a. age and experience of the participants;

b. temperature;

c. equipment reliability and wear;

d. weather and environmental conditions;

e. emergency plans; and

f. leadership and SMEs.

DEBRIEF

52. The personal challenges each participant will meet can be discussed in a learning/supportive environment. Group leaders should be especially aware of difficulties some participants may have encountered and use judgment in adapting group debriefs. It may be more appropriate to discuss some issues in private. Depending on the intensity of the experience, some participants may require some personal time or a team activity immediately following activity. Staff, especially developing leaders, will require special attention and debrief.

LOGBOOK

53. Cadets should keep a logbook of their learning progressions, skiing times, and goals. It is important for them to see how they have progressed in the sport and it will show them their successes and what they need to work on. It is also important to keep track of the number of kilometres skied (for advanced skiers mostly) to prevent over training and burnout. It can be a simple diary or a table as follows:

Date	Techniques Learned	Techniques Practiced	Goals for Next Practice	No. of km Skied

ANNEX A

SKIING PROGRESSION MATRIX

Age	Star Level	Intensity of the Activity	Delivery Method	Class of the Activity	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-18	Green to NSCE	Famil/Beginner	Day Instruction	Level 1-2	None	20	1:10	LHQ	CIC/CIs Local SME	Detachment
13-18	Red to NSCE	Intermediate	Day Trip	Level 2	Bronze	20	1:15	LHQ	CIC/CIs Local SME	Detachment
16-18	Gold to NSCE	NCCP Level 1	Course	Level 2-3	None	N/A	1:20	CCC	CIC/CIs Local SME	Detachment
15-18	Silver to NSCE	Advanced	Day Trip	Level 3	Silver	20	1:10	LHQ/Zone Region/ National	CIC/CIs Local SME	Region/ National
16-18	Gold to NSCE	Advanced	Over Night	Level 3	Silver	20	1:10	Zone/Region National	CIC/CIs Local SME	Region/ National

Figure 6A-1 Skiing Progression Matrix

ANNEX B

REFERENCES

Canadian Association of Nordic Ski Instructors (CANSI). *The Instructor's Manual for Teaching Nordic Skiing*. Gloucester, Ontario, 1994.

Cross Country Alberta. *Ski Touring – The Right Stuff*. 1989.

Cross Country Canada. *Cross Country Skiing Levels 1 & 2 Technical*. *Canmore*, Alberta, 1987 and 1995.

Cross Country Canada. *Tour Leading Manual*. 3rd ed. 1983.

Helena, M., M. Clelland, and A. O'Bannon. *Allen & Mike's Really Cool Backcountry Ski Book – Travelling & Camping Skills for a Winter Environment*. Falcon Publishing Inc. 1996.

CHAPTER 7

HIKING AND BACKPACKING

DESCRIPTION OF ACTIVITY

1. Hiking is the activity of vigorous walking in the outdoors/wilderness on an unpaved trace, either a path or navigating an unmarked route. Usually hiking consists of travelling across country over different terrains, sometimes with inclines and declines. Hiking is sometimes referred to as mountain/hill walking IAW DAOD 5031-10, Adventure Training. Hiking can take place on a route with a different start and end point, a circuit or a mid-point destination and return. Hiking may also include obstacle crossings of low-level intensity such as logs and fallen trees; however, it does not include river crossings (fording). Activities that include crossing such obstacles require a higher skill level from all participants (for river crossing refer to Chapter 5, Annex C), special equipment and are regulated separately. Often participants will carry water, food, living and emergency equipment. In this document, hiking becomes backpacking once equipment is carried for an overnight stay.

2. Mountaineering is the skill of mountain travel at high altitudes; usually an assent and foot travel over 2000 m above sea level, sometimes above the tree line and on glaciers. Mountaineering often combines climbing skills either as part of optional training opportunities or necessary for safety. Mountaineering will be regulated in combination with climbing in a separate chapter.

3. **Rating Systems.** Many rating systems exist for rock climbing and alpine mountaineering. Although DAOD 5031-10 uses the British Adjectival Grade Scale (from “Easy” to “Extremely Sever”), the CCM will use the Yosemite Decimal System (YDS), the most common rock climbing rating scale in North America. Numerical scales are popular because their progression is expected for example: YDS has a scale from 1 to 5 and UIAA has a scale from I to X. Furthermore, YDS rates the hardest/most technical section on a terrain/route. One of the other advantages of the YDS scale is that it includes ratings for travel over non-vertical terrain. The following word description of the YDS scale was modified from the book *Mountaineering: Freedom of the Hills,* 1997:

a. **Class 1.** Hiking, usually on a trail.

b. **Class 2.** Simple scrambling, crossing obstacles with the occasional use of hands, requires route-finding skills, may be backcountry dense bush.

c. **Class 3.** Angle is steep enough that hands are required for balance; scrambling on rocks using hands and feet, a rope might be carried.

d. **Class 4.** Simple climbing, often with exposure requiring a rope belay. A fall could be serious or fatal. Natural protection can usually be easily found.

e. **Class 5.** Technical rock climbing begins. Climbing involves the use of ropes, belays, and the placement of natural or artificial protection for the leader in case of a fall. An open ended decimal extension to Class 5 exists for rating climbs within this category.

f. Class 5 is further divided using a decimal and alphabetical scale, describing vertical climbs.

AIM OF ACTIVITY

4. The aim of hiking is to first learn the skills of outdoor/hill walking so that they are beneficial to the physical health of the participants, offer a learning environment not available before and explore the outdoor surroundings of a specific area. Hiking can be a challenging activity for new cadets who have never been exposed to this activity; it can also offer challenge to experienced hikers by varying the conditions in which this activity is delivered. Hiking develops some of the necessary basic skills required in composite skills such as backpacking/camping and mountaineering. Hiking and backpacking in the CCM will take place in terrain rated from “flat” to Class 3 of YDS. Class 4 and 5 will be considered climbing, alpine travelling or mountaineering.

CANADIAN REGULATIONS CONCERNING SPECIFIC ACTIVITIES

5. Specific regulations exist in certain areas such as national parks, nature preserves, world heritage sites, private land and crown lands. Access to Canada's outdoors is readily available through private owners, municipalities, parks officials and forestry districts. It is sometimes necessary to gain a land use permit or special licenses for some specific areas. Often, there are costs and special regulations (limiting the groups size, access points, camping practices and waste disposal) associated with the use special areas such as national parks. Members of the CCM must adhere to all regulations in a specific area in addition to DND regulations.

MILITARY REGULATIONS

6. DAOD 5031-10 separates the activities of mountain walking; mountaineering; rock and ice climbing; and wilderness trekking. This instruction will include the safety requirement of DAOD 5031-10 for these activities and will also add to those requirements. DAOD 5031-10 will serve as a safety minimum for this instruction.

7. The Department of National Defence requires that a right of use permit be granted for all use of private property. Commercial property may be accessed through the purchase of passes or permits. The purchase of a pass or permit then becomes the legal contract between the owner/governing agency and the CCM members and as such grants right of use according to the conditions under which the permit was purchased.

AUTHORITY LEVEL

8. All hiking and backpacking activities require prior approval by Detachment Commanders. Backpacking in a terrain rated as YDS Class 3, however required authority by the RCSU Commander. Wilderness trips that include Class 3 terrain will usually include regional or national involvement and as such will require that level of authority.

9. **Governing bodies** (provincial; national and international associations; federations, industry standards).

10. There is no national or provincial governing body of hiking and backpacking although numerous agencies use it as an activity to deliver their curriculum. There are also numerous qualification courses and agencies that offer hiking and backpacking experience and certification, however none of them are required by law. The ACMG is the most recognized national agency in this field, and it offers a hiking instructor qualification. Although the hiking and backpacking leaders/instructors do not require this qualification, the ACMG qualification is the standard of comparison used in this instruction.

11. Association of Canadian Mountain Guides (ACMG)
P.O. Box 8341
Canmore, AB T1W 2V1
Telephone: 403-678-2885
Fax: 403-609-0070
Email: acmg@acmg.ca

12. IFMGA – International Federation of Mountain Guides and Associations.

EQUIPMENT REQUIREMENTS

13. The following equipment is necessary and must be carried:

a. **Appropriate Clothing**

(1) must be appropriate for the weather conditions and the activity;

(2) offer wind and rain resistance;

(3) insulation and padding;

(4) flexibility without drag;

(5) layered as necessary;

(6) be comfortable; and

(7) be complete including head, hands, legs and foot warmth.

b. **Appropriate Footwear**

(1) on flat terrain – good soled shoes that offer good cushioning, arch support and grip are necessary;

(2) on inclined terrain (Class 2-3) – hiking boots that offer ankle support are necessary in addition to cushioning, arch support and grip; and

(3) on expected wet terrain – some form of water resistance or impermeability may be necessary, changes of sock are considered a minimum requirement.

c. Necessary food and water.

d. **Communications**

(1) if any part of the hike is to take place more than one-hour drive from medical help; it is required that the group carry at least one method of communication for requesting help; and

(2) hand-held radios, short wave radios, cellular phones and satellite phone must be considered so that communications is reliable with at least one means.

e. **First Aid**

(1) first aid equipment must be carried with every group that travels independently; and

(2) basic first aid equipment must be adequate for the activity and in sufficient quantity for the size of the group.

f. **Group Equipment**

(1) at least one mean of purifying water is required;

(2) appropriate maps and compasses for navigation;

(3) whistles; and

(4) bear spray if travelling in bear country.

g. Hand-held signal flares should be brought if the activity is taking place in a wilderness setting and consider learning how to use, and bringing, a GPS.

14. D E L E T E D

RATION REQUIREMENTS

15. Rations are usually required for hiking activities, with the exception of short half-day hikes:

a. **Type**

(1) Preferably lightweight.

(2) Can be eaten warm or cold.

(3) High energy.

b. **Amount**

(1) Sufficient quantity for each member for the duration of the hike.

(2) Extra rations for a safety margin (usually at least one extra meal for a short hike and three meals for a five-day trip).

c. **Preparation**

(1) Permission must be granted for open fires and open fire cooking (under supervision).

(2) Rations should be easily prepared especially with low-level skilled cadets.

(3) Hiking participants with experience and acquired skills may graduate to complete meal planning and preparation of fresh ration.

(4) Waste disposal must be in accordance with facilities and/or land use agreement; “no trace or low impact” camping skills as established Royal Canadian Army Cadets Reference Book.

d. **Fluids**

(1) Should be readily available in large quantities.

(2) Weight will likely prove to be prohibitive, consider filtering water as necessary, ensure streams and waterways are available, and an appropriate filter/purifier is used.

(3) May boil water for consumption; bring it to a rolling boil for at least five minutes (as part of planning, the hikers must consider the extra fuel requirements of this water purifying method).

(4) Use chemical purification such as iodine and bleach sparsely and for short durations, following the manufacturer’s directives. In some cases, specific chemical treatments are prescribed according to the conditions, follow the manufacturers directive and obtain medical approval. Note that chemical water treatments are contra-indicated for certain medical conditions.

TRANSPORTATION REQUIREMENTS

16. Safety vehicle and evacuation means may be the same vehicle. A safety vehicle must be present at a location as close as possible to the leader. The safety vehicle must have appropriate communications means to be in contact with both the trip leader and local authorities. A first aid kit must be available in the safety vehicle at all times.

17. In wilderness settings where no land or water safety vehicle is accessible within three hours, proper arrangements must be made for helicopter evacuations through either search and rescue, the CF, parks services, police/fire department or the national coast guard prior to the expedition. If this last option is used, proper communications must be established with the evacuation agency. In this case, communications will usually require satellite phone access and a prepared list of the appropriate phone numbers and emergency procedures. Plan ahead.

CADET SKILL LEVEL

18. The basic skills and application of hiking should be made available to every cadet. The development of advanced hiking skills such as mountaineering however must be introduced progressively to cadets who wish to participate.

a. **Qualification.** There are no qualifications necessary for hiking and backpacking activities.

b. **Experience**

(1) No experience is necessary for flat terrain, day hiking.

(2) Participants must have experienced at least one flat terrain activity prior to taking part in an inclined hike (Class 1-2).

(3) Participants must have experienced at least a day hike prior to taking part in an overnight backpacking trip.

c. **Basic Knowledge/Technical Skill**

(1) Participants must have participated and demonstrated reasonable skill prior to taking part in a more physically/technically demanding hiking activity.

(2) Participants must have carried their own equipment.

(3) Hikers should have the opportunity to participate in the navigation/route selection discussion.

(4) Participants must have finished the hike with no great discomfort.

d. Basic knowledge and technical skill in hiking will often serve as a prerequisite to more advanced composite skill such as camping and wilderness backpacking.

e. Recommendations for the cadets who will take part in hiking adventure activity:

(1) Cadet may be selected and/or matched in specific groups according to their qualification, experience and level of physical fitness.

(2) Cadets must demonstrate a willingness to participate in hiking and backpacking activities prior to selection for Class 3 hiking wilderness trips.

PHYSICAL FITNESS

19. There are no physical fitness level requirements for participating in hiking and backpacking activities except at the senior/advanced levels. In technically challenging conditions (Class 3), overnight and wilderness trips require a minimum level of fitness. Refer to the hiking and backpacking progression matrix at Annex A.

TRAINING PROGRESSION

20. Refer to the hiking and backpacking progression matrix at Annex A.

QUALIFICATIONS, EXPERIENCE AND FITNESS OF LEADERS AND OPI

21. **Qualification**

a. Up to Class 2 hiking and backpacking activities **not** including wilderness travel:

(1) Instructors and leaders must be MOC Army qualified.

(2) At least one leader must hold a current Standard First Aid qualification.

b. For Class 3 hiking and backpacking activities or wilderness backpacking in Class 1-2:

(1) At least one leader must hold a current Wilderness First Responder qualification.

(2) It is recommended that instructors and leaders hold the ACMG Backpacking Hiking Guide qualification.

22. **Experience.** Up to Class 3 hiking:

a. One leader must have at least 10 days of personal or leadership experience in similar conditions as the ones expected on the activity.

b. At least one leader should have previous experience in the area being traveled.

23. No specific fitness level is required for leaders or instructors; they must however at least be of equivalent fitness as the cadets under their charge. Leaders and instructors will usually be of a higher level of physical fitness since they will require additional cardiovascular and muscular endurance to deal with emergencies in addition to fulfilling their duties as a leader.

24. At least one leader must have command experience equivalent to a trusted/mature platoon commander.

INSTRUCTOR TO CADET RATIOS

25. There must be at least two staff on every hiking/backpacking activity. On relatively levelled terrain and easy access to Emergency Medical Services (EMS), the instructor to cadet ratio can be as large as 1:10. In isolated wilderness settings, the instructor to cadet ratio will not be greater than 1:5.

MAX AND MIN NUMBER OF PARTICIPANTS

26. Because of the impact on trails, routes and campsites, groups must be restricted to 30 personnel maximum. It is recommended that large groups be divided into smaller ones, departing at staggered intervals, use different trails, and camp separately. Since the survival of the group will usually rely on teamwork, groups must have at least four members in rural conditions and six in isolated wilderness areas.

MANAGEMENT GUIDELINES

27. **Group Organization and Leadership for Hiking and Backpacking Trips.** An instructor or trip leader cannot also be the only supervisor. Certain conditions require extra adult supervision, i.e. more technical conditions (Class 2-3), isolated wilderness areas, bear country, new cadets, and instructors with little experience. Leadership and command responsibilities are often shared with experienced cadets in order to teach the necessary skills, develop self-confidence and teamwork. Adult leaders however must take responsibility for the following:

a. Responsibilities of the leader:

(1) set pace and keep track of group;

(2) select route to be followed;

(3) scouts obstacles and difficult areas;

(4) act as the first level of rescue/first aid if required; and

(5) manage the safety equipment.

b. Responsibilities of the last person in a hiking/backpacking group:

(1) keep group intact;

(2) alert for necessary rescue/first aid; and

(3) carry any other safety equipment.

c. Group responsibilities:

(1) keep group compact;

(2) maintain sufficient spacing and tempo;

(3) keep the next person up and down from you in sight, signal to stop if necessary;

(4) communication must carry up and down hill; and

(5) give the right of way to uphill travelling groups, very large groups or emergency evacuations.

28. **Rescues.** Leader and instructors must be prepared for emergencies. All hikers must be trained in basic rescue and first aid so that they may help themselves in an emergency. Also, it is beneficial to develop a team approach to rescues and instruct team rescues to hiking groups.

a. The priority of rescue must always be:

(1) people; and

(2) life sustaining equipment (i.e. food, communications and first aid kits).

b. Group responsibilities in a rescue:

(1) alert other hikers of accident or dangerous conditions;

(2) hikers must initiate whatever self-rescue or first aid is necessary, accept assistance;

(3) other hikers are to assist in a rescue to the best of their abilities when it is safe to do so; and

(4) all hikers not involved in the rescue are to stop, clear the path, gather as a group, walk back downhill if necessary, and wait for further instruction.

29. **Wilderness Safety.** Many aspects of wilderness safety are generally applicable to hiking and backpacking, they must however be emphasised in wilderness settings:

a. **Environmental Conditions**

(1) altitude sickness;

(2) coping with animals;

(3) coping with the weather;

(4) heat and cold injuries and illness;

(5) coping with poisonous plants; and

(6) water requirements.

b. **On Route Considerations**

(1) trail/march discipline;

(2) lost hiker, lost or stranded group;

(3) accidental injuries and repetitive stress injuries, endurance problems (fatigue and dehydration);

(4) route/obstacle crossing options; and

(5) teamwork.

c. **Campsite Safety**

(1) fire and stove safety; and

(2) food storage and food loss.

NECESSARY PLANNING

30. **Familiarity With Area and Recces.** At least one instructor, usually the trip leader, should have training/tripping experience of the area prior to conducting cadet training/tripping. If a physical recce is not available, extensive specific recces of the following points must be done prior to the trip. Written information, the Internet and local knowledge can be used to prepare for the trip. Map recces are a component of the preparation of a trip, and cannot serve as the sole source of information prior to departure.

a. start and finish points;

b. emergency evacuation points;

c. camp sites, primaries and back-ups;

d. rendez-vous points;

e. alternates;

f. environmentally sensitive areas; and

g. identified danger areas, i.e. cliffs, rockslides, ranges.

31. **Safety Checklist.** A safety checklist is used during the preparation phase of all hiking/backpacking trips. It should contain the following points. This list is not exclusive and safety checklists should be amended to match the activity planned:

a. File a trip plan (itinerary, path, expected timings, methods of contact) with local authority, training headquarters or use an on land safety vehicle.

b. Safety equipment required by law.

c. First aid equipment appropriate to size of group and type of activity.

d. Equipment checked for serviceability.

e. Emergency and evacuation plan, including details on how to contact emergency medical services, and headquarters support.

f. Food and water.

g. Necessary living equipment.

h. Communications equipment and system of signals to be used within the group and to access outside help.

i. Leadership briefing detailing how the trip will be conducted.

j. Trip log.

k. Risk assessment and management.

TIME OF YEAR REGULATIONS

32. Although climates and geography differs in the many different regions of Canada, and it is possible to encounter snow out of season, hiking and backpacking in this instruction is restricted to the method of foot travel cross-country in the Canadian climate from spring to fall. Winter camping, snowshoeing, cross-country ski touring, mountaineering and glacier travel will be covered separately.

DURATION AND INTENSITY LEVEL OF THE ACTIVITY

33. Reasonable durations and intensity level according to age and training background has been developed in the progression matrix at Annex A.

ENVIRONMENTAL CONSIDERATIONS

34. Only the safety of the participants will supersede the priority with which environmental stewardship is followed.

35. Waste management for personal hygiene, food scraps, food containers and human waste during hiking activities will follow camping skills of “minimum impact” at a minimum and “leave no trace” in optimum conditions.

36. The instructor to cadet ratios will limit group sizes. The maximum allowable visitors at campsites will limit size of tripping groups. Special considerations must be given to environmentally sensitive areas, minimal impact must be imposed onto any given environment. It is better to separate large groups into smaller units and space-out the departure of each smaller group so that no large, intrusive group of hikers block-up sections of a path or an area visited. Campsites (established or wilderness) should not have to support more than 15 visitors.

WEATHER CONSIDERATIONS

37. Know the weather forecast, learn how to forecast weather.

38. It is common to hike and backpack in the rain and fog but if it interferes with reasonable visibility or strong winds accompany the rain then it is necessary to take extra precautions. Spacing between hikers should be diminished during periods of poor visibility, be aware that precipitation may affect water levels and the stability of the terrain being crossed.

39. In case of lightning, shelter should be sought, if not in a building (cabin) then in a dense stand of trees if available. Lightning precautions below must be followed:

a. Stay off high peaks, ridges, spires, narrow valleys and large bodies of water.

b. In case of storm forecast, do not plan to hike such formations as the ones listed above.

c. Keep track of weather forecast either by communications or by forecasting the weather yourself, keep track of storm movements.

d. Avoid shallow caves and overhangs, it's not because you are sheltered from the rain that you are automatically sheltered from lightning.

e. Keep a safe distance from metal and graphite objects (paddles, climbing equipment, walking poles, tripods or external framed packs); cache them away and retrieve them later if necessary.

f. Change location if your hair stands on end.

g. Insulate yourself from the ground using a backpack or air mattress, minimize your height and crouch down feet together, do not lay down completely.

h. If travelling as a group, spread out (10 m apart).

i. Be prepared to administer appropriate first aid (i.e. CPR, electrical burn, blunt trauma, shock).

j. Learn the principle of the "Cone of Protection".

40. Although extremely cold or hot temperatures may not interfere directly with hiking, activities must be adapted accordingly; extra or specialized clothing and equipment may be necessary. Special consideration should be given to appropriate clothing such as outer layers used for wind and water protection, footwear and living equipment such as tents, sleeping bags and water containers. Hiking instructors/leaders must be trained to recognize signs of heat/cold-related illnesses, treatment and prevention.

LIMITATIONS

41. Hiking is limited by the following conditions. These conditions preclude hiking/backpacking tripping from beginning and also direct its cessation as quickly as safely possible:

a. YDS Class 3 and lesser terrain, Class 4 and 5 are permissible as climbing activities and therefore must meet the requirements listed in that chapter.

b. Be aware and plan accordingly during hunting seasons, environmentally sensitive areas or times of the year, avalanche season, warm days but frosty nights seasons/altitudes; rain or tornado seasons.

c. Most hiking and backpacking will occur during daylight hours. Hiking after dark or prior to sunrise must take the low visibility condition into consideration. Hiking in low visibility will not take place in dangerous conditions where a slip or fall could be dangerous, e.g. on a steep side of a hill, in a dense brush need waterways, near a highway. Light and communication must be used to keep the hiking group together, e.g. headlamps, glow sticks, reflective tape and verbal communication.

d. When hiking on slippery surfaces near water or crossing obstacles over water, backpackers must untie chest straps and waste belts so they can free themselves readily if necessary.

e. Hiking groups will not separate unless it was previously arranged.

RISK ASSESSMENT AND MANAGEMENT

42. Certain inherent risks exist in all hiking activities, e.g. physical injury such as sprained/broken ankles, cold illnesses and equipment loss or damage. The safety regulations set for the Canadian public, service members and CCM members have for purpose to reduce the inherent and accidental risks involved with activities developed around the wilderness. The following lists some points to be considered in risk assessment and management of hiking activities:

a. participants: number, age, qualifications, experience;

b. temperature;

c. equipment: necessary, required, desired, personal and group;

d. skill level, qualifications and experience of the leader/instructor; and

e. support and resources.

DEBRIEF

43. The personal challenges each participant will meet can be discussed in a learning/supportive environment. Group leaders should be especially aware of difficulties some participants may have encountered and use judgment in adapting group debriefs. It may be more appropriate to discuss some issues in private. Depending on the intensity of the experience, some participants may require some personal time or a team activity immediately following activity. Staff, especially developing leaders will require special attention and debrief.

LOGBOOK

44. Many hikers may wish to keep a personal logbook or journal of their hiking/backpacking activities, qualifications, experience and trips. Such a personal logbook may be used to establish suitability for future backpacking activities, courses or instructor positions. Trip and instruction logbooks are an important part of recording and reporting hiking activities. OPIs, leaders and instructor must keep a logbook of the activities under their charge, as it becomes a legal record of the activity.

ANNEX A

HIKING AND BACKPACKING PROGRESSION MATRIX

Age	Star Level	Intensity of the Activity	Delivery Method	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-18	Green to Gold (Note 1)	Familiarization	Day Instruc-tion/Trip	Flat Terrain	1 and 2	None	Max 30 Min 4	1:10	LHQ	CIC/CIs	Detachment
	Green to Gold (Note 1)	Familiarization	Day Trip	Up to Class 1	1 to 4	None	Max 30 Min 4	1:10	LHQ	CIC/CIs Local SME	Detachment
13-18	Red to Gold (Note 1)	Basic	Day Trip/ Overnight Trip	Up to Class 2	1 to 4	None	Max 20 Min 4	1:10	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
14-16	Silver to Gold (Note 1)	Basic	Overnight Trip	Up to Class 2	1 to 4	None	Max 20 Min 6	1:10	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
15-17	Silver to Gold (Note 1)	Intermediate	Overnight Trip	Up to Class 3	1 to 4	Bronze	Max 15 Min 6	1:5	LHQ/Zone	CIC/CIs Local SME Contract With Trade	Detachment/ Region
16-17	Gold (Note 1)	Advanced	Wilderness Trip	Up to Class 3	1 to 4	Bronze	Max 15 Min 6	1:5	Zone/Region	CIC/CIs Local SME Contract With Trade	Detachment/ Region/ National
17-18	NSCE & MC	Advanced	Wilderness Trip	Up to Class 3	1 to 4	Bronze	Max 15 Min 6	1:5	Zone/Region	CIC/CIs Local SME Contract With Trade	Detachment/ Region/ National

NOTE

Gold Star level in this chart includes NSCE and MC unless those levels are separately identified.

Figure 7A-1 (Sheet 1 of 2) Hiking and Backpacking Progression Matrix

Classification of Activity (YDS)

Flat terrain

Class 1: Hiking

Class 2: May contain some simple scambling, with possible occasional use of hands

Class 3: Scampling; handrails, spotting

Class 4: Simple climbing often on exposed surfaces, ropes are usually used, natural protection can be found. A fall on a Class 4 could severely injure a person, leave them permanently disabled or dead.

Safety Skills

1 Displays good response and behaviour to direction

2 Can activate rescue communications

3 Can navigate and find a route

4 Recognizes danger and backs off

Figure 7A-1 (Sheet 2 of 2) Hiking and Backpacking Progression Matrix

ANNEX B

CLIMBING CODE[1]

1. A climbing party of three is the minimum, unless adequate prearranged support is available. On glaciers, a minimum of two-rope teams is recommended.

2. Rope up on all exposed places and for all glacier travel. Anchor all belays.

3. Keep the party together, and obey the leader or majority rule.

4. Never climb beyond your ability and knowledge.

5. Never let judgment be overruled by desire when choosing the route or deciding whether to turn back.

6. Carry the necessary clothing, food and equipment at all times.

7. Leave the trip itinerary with a responsible person.

8. Follow the precepts of sound mountaineering as set forth in textbooks of recognized merit.

9. Behave at all times in a manner that reflects favourably upon mountaineering, with minimum impact to the environment.

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1 Reprinted with the permission of the publisher from *Mountaineering: The Freedom of the Hills*. 6th ed. Don Graydon and Kurt Hanson (Eds), Seattle, WA: The Mountaineers, 1997.

ANNEX C

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CHAPTER 8

MOUNTAIN BIKING

DESCRIPTION OF ACTIVITY

1. Mountain biking is defined within this chapter as any biking on trails and secondary roads. Biking on trails will from here after be referred to as off-road biking. Biking on secondary roads will from here after be referred to as road biking.

2. For the purpose of training in the CCM, mountain biking activities have been divided into six levels with two additional training components; introductory training and care and maintenance.

3. The care and maintenance training components are:

a. **Introductory Training**

(1) safety while riding;

(2) rules of the road;

(3) hand signals;

(4) selecting and fitting a bike;

(5) equipment required for biking;

(6) formations for riding;

(7) stopping procedures;

(8) communication while on bike; and

(9) changing gears.

4. Care and maintenance training is essential for insuring that the bicycles and all equipment are properly cared for. Care and maintenance lectures should reflect the level of the training with more care and maintenance being required at higher levels of training. The use of SMEs is recommended for insuring that all bicycles are given an annual tune-up.

4A. **Rating Systems.** Many rating systems exist for mountain bike trails. The CCM rating system is a simplified version of the International Mountain Bicycling Association (IMBA) Trail Difficulty Rating System (TDRS). The IMBA TDRS (Figure 8-1) was created to help trail users make informed decisions, encourage visitors to use trails that match their skill level, manage and minimize risk, improve the outdoor experience and aid in the planning of trails and trail systems. The IMBA TDRS is divided into five categories based on width, trail surface, trail grade, obstacles and technical features. The CCM rating system combines similar categories of the IMBA TDRS creating three categories of trail conditions:

a. **Familiarization Trails.** Mostly flat, hard packed surfaces with some hills that require limited skill to ascend and descend. Familiarization trails conform to the standards of the IMBA TDRS categories of “Easiest” and “Easy”.

b. **Intermediate Trails.** Some loose surface with minor obstacles such as roots and rocks with a variety of moderate hills that require skill to ascend and descend. Intermediate trails conform to the standards of the IMBA TDRS category of “More Difficult”.

c. **Advanced Trails.** A mix of flat, loose and technical terrain including hills with a variety of ascents and descents on steep and uneven terrain, cornering and obstacles such as roots, rocks and logs throughout the trail. Experienced trails conform to the standards of the IMBA TDRS categories of “Very Difficult” and “Extremely Difficult”.

Trail Difficulty Rating System

	Easiest White Circle	Easy Green Circle	More Difficult Blue Square	Very Difficult Black Diamond	Extremely Difficult Dbl. Black Diamond
Trail Width	72 in. or more	36 in. or more	24 in. or more	12 in. or more	6 in. or more
Tread Surface	Hardened or surfaced	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable
Average Trail Grade	Less than 5%	5% or less	10% or less	15% or less	20% or more
Maximum Trail Grade	Maximum 10%	Maximum 15%	Maximum 15% or greater	Maximum 15% or greater	Maximum 15% or greater
Natural Obstacles and Technical Trail Features (TTF)	None	Unavoidable obstacles 2 in. tall or less Avoidable obstacles may be present Unavoidable bridges 36 in. or wider	Unavoidable obstacles 8 in. tall or less Avoidable obstacles may be present Unavoidable bridges 24 in. or wider TTF's 2 in. high or less, width of deck is greater than half the height	Unavoidable obstacles 15 in. tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24 in. or wider TTF's 4 in. high or less, width of deck is less than half the height Short sections may exceed criteria	Unavoidable obstacles 15 in. tall or greater Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24 in. or narrower TTF's 4 in. high or greater, width of deck is unpredictable Many sections may exceed criteria

Figure 8-1 IMBA TDRS (www.imba.com)

5. The mountain bike levels are:

a. **Level 1 – Familiarization Ride.** A familiarization ride is intended to introduce cadets to mountain biking. This ride will also allow the cadets to get used to the riding formations and communication signals used within the group.

b. **Level 2 – Day Trip On Road.** The day trip is intended to allow cadets to build on the skills learned during the familiarization ride. Cadets can also prepare for multi-day trips by beginning to carry light loads. Carrying light loads will give the cadets the opportunity to experience the new balance required while working with a loaded bike.

c. **Level 3 – Day Trip Off-road.** This trip is intended to allow cadets to build on the skills learned in Level 1 and 2 training. Cadets can progress to more difficult terrain off-road. Carrying light loads is recommended to prepare for higher-level training.

d. **Level 4 – Multi-Day Trip On Road.** Multi-day trips are intended for cadets with advanced knowledge and skills in mountain biking.

e. **Level 5 – Multi-Day Trip Off-road.** Multi-day trips are intended for cadets with advanced knowledge and skills in mountain biking. Off-road trips will be more demanding and will require greater technical skills in off-road riding.

f. **Level 6 – Multi-day Trip Off-road.** Highly intensive advanced training to be conducted in the most demanding environments.

AIM OF ACTIVITY

6. The aim of mountain biking within the CCM is to introduce cadets to the sport of mountain biking. Mountain biking also combines other skills such as communication, camping, physical fitness, leadership, and problem-solving that are taught in the CCM. Cadet activities can be supplemented with local biking groups and SMEs.

CANADIAN REGULATIONS CONCERNING SPECIFIC ACTIVITIES

7. The Canadian regulations surrounding the use of bicycles are derived mainly from the Highway Traffic Act for each province (this act is given a different name in some provinces). Bicycles are required to follow all rules and regulations outlined in the provincial legislature.

MILITARY REGULATIONS

8. There are currently no military regulations surrounding the use of bicycles. Some military bases require groups using bicycles to have vehicle support in the rear and front at all times when they are travelling on roads.

CCO SAFETY REGULATIONS

9. Cadets will never ride with more than one person on a bicycle. The only exception to this rule is if the bicycle is specifically designed to have multiple riders. In this case the number of riders will be determined by the individual bike specifications.

10. Cadets are required to have vehicle support in the rear, or on route to, at all times while travelling on roads. Cadets will never travel on freeways, or limited access highways. Cadets are permitted to travel on regional roads and secondary roads. While travelling off-road vehicle support is not necessary, unless the training is taking place on a military base that requires vehicle support. The group should be self-sufficient. Vehicles must have pre-determined extraction points for off-road training in the case of an emergency.

AUTHORITY LEVEL

11. Appropriate authority must be granted to carry out all forms of mountain biking activities. The authority is designated in the progression matrix at Annex A.

GOVERNING BODIES

12. There are no current national governing bodies surrounding the use of bicycles. Each province is responsible for regulating bicycle use. The Highway Traffic Act in each province determines the regulations for bicycle use.

13. Although there is no official governing body there are many well-developed cycling programs in Canada. Some of the cycling offices include:

a. BTAC (Bicycle Trade Association of Canada) 1-866-528-BTAC (2822).

b. CMIC (Canadian Mountain Bike Instructor Certification) this is only available in British Columbia 604-931-6606.

c. National and provincial contacts can be found at Annex B.

EQUIPMENT REQUIREMENTS

14. Safety equipment varies from province to province; however the CCM will follow one set of regulations for all provinces. These regulations are designed to meet or exceed the regulations of all provinces.

15. Safety equipment for each participant:

a. **Canadian Standards Association (CSA) Approved Helmet.** The helmet must be snug and stable with proper chinstraps. The chinstraps must hold the helmet in the correct position on the head for proper protection. If a helmet suffers a crash or sever blow of any type the helmet must no longer be used.

b. **Bicycle.** With both front and rear braking system, signaling device, i.e. horn or bell, red light or reflector in the rear, white light in the front, red reflectors in the rear, white reflectors in the front. Lights must be used when travelling in night or low light conditions.

c. **Clothing.** Pants must be tucked in, tapered or restricted to prevent from getting caught in the gear mechanism.

d. **Water.** Cadets must have water with them while on mountain biking activities. Water bottle holders with water bottles can be mounted to the bicycle frame, or water bottles can be carried in panniers, or a camel pack hydration system can be used (camel pack hydration systems are the optimal choice for mountain biking activities).

e. **Day Pack.** Panniers or backpacks must be used for Level 2 to 6 training. Day packs are not to exceed 30 L.

f. **Reflective Vest.** Each group must have at least the rear person wearing a safety vest at all times.

16. Safety equipment require for the group:

a. **First Aid Kit.** Must be complete with enough supplies for the number of members in the group.

b. **Communications.** Communication within the group must be established in introductory training. Each group must have at least one method of contact with the safety vehicle. Group leaders must have visual contact with all participants at all times during the training.

c. **Extra Food and Water.** The safety vehicle must carry extra food and water in case of the needs for re-supply. Individual groups will carry water purification systems appropriate to the local climate.

d. **Basic Repair Kit.** Basic repair kits will hold maintenance tools to allow for complete tire change, chain link removal, and brake tightening.

e. **Safety Vehicle.** Must carry complete backboard change and all first aid evacuation equipment.

RECOMMENDED EQUIPMENT LIST

17. Participants may choose to wear sunglasses, biking shorts, extra padded seat covers, gloves, full face guard helmets, biking shoes and appropriate peddle attachments, bicycle computer, handlebar bag, reflective vest, rear view mirror or biking shirts. All camping equipment must be carried in panniers and day packs for Level 4 to 6 training. Level 4 and 5 training should try to be as self-sufficient as possible. Level 6 training activities must be completely self-sufficient.

18. Extra group equipment can be carried in the safety vehicle. Extra equipment can include wheel frames, tire inner tubes, complete bicycles, horns, bells, lights, batteries, helmets, tire patch kit, Allen wrenches, bike lube, pressure gauge, screwdriver set, chain, any extra repair items designated by SMEs. When packing for a mountain biking trip it is very important to consider space restrictions. Bikes are very limited in the amount of equipment that they can carry for several reasons. Day packs that are too big will become a safety hazard, and thus are limited to 30 L. Also panniers (both front and rear) cannot hold as much gear as a regular hiking pack would. When planning for tripping group leaders should keep these factors in mind.

RATION REQUIREMENTS

19. IMPs or fresh rations can be used in biking activities. High-energy bars and sports drinks are recommended as they will replenish depleted stores from the body and are very compact.

20. Appropriate amount for the number of meals expected to be served. One extra meal should be carried in case of any sort of delay on Level 2 to 6 training.

21. Preparation cooking over single burner mountain stoves is optimal as these stoves take up very little room. Rations can also be eaten cold if cooking equipment is not available. Eating cold rations is not recommended for extended trips.

TRANSPORTATION REQUIREMENTS

22. When transporting bicycles, legislation dictates that all cargo must be secure. To achieve this bike brackets can be used inside of a cube van. It is the responsibility of the group leader to ensure that bikes are secure prior to all transportation. Bicycles can be individually wrapped in blankets and secured inside of a closed vehicle. Trailers can be used with appropriate bicycle brackets. Car mounted racks can be used to transport a smaller number of bicycles.

23. **Safety Vehicle.** Safety vehicles must travel in rear of, or on route to, all groups while on roads. The hazard lights must be on at all times while training is in progress, even when stopped for short breaks. Some military bases require that a second vehicle be in front of the group while on base. This vehicle must also have hazard lights on while training is in progress.

24. **Evacuation Vehicle.** The evacuation vehicle, can be the safety vehicle, must be capable of transporting an immobilized person on a backboard. If the evacuation vehicle is the safety vehicle and is away on an emergency, all training must stop. Training cannot take place without a safety vehicle. Having an additional vehicle for emergency use is optimal however this is not a requirement for training.

CADET SKILL LEVEL

25. All cadets and staff must be briefed on the Highway Traffic Act prior to undergoing a familiarization ride. Any other municipal legislation or base regulations should be part of this briefing.

26. All cadets and staff will perform a pre-ride check of all personal equipment and bicycles prior to any movement. Staff is responsible for not only their own equipment but also for checking the group equipment and all cadets' equipment.

27. Cadets and staff must show proficiency in familiarization ride to be permitted to progress to day trips. Proficiency in this case also includes appropriate physical fitness level to complete the training.

28. Proficiency at the day trip level must be exhibited prior to multi-day trips.

29. Progression from familiarization ride to day trip to multi-day trip is advisable only when the group leader or SME feels that all participants are capable of completing the task successfully and safely.

30. Multi-day trips should be reserved for more senior cadets who have already participated in Level 1 and 2 training and who have displayed a particular interest in continuing on with mountain bike training.

31. All cadets should have a basic understanding of care and maintenance prior to conducting Level 2 and 3 training. All repairs must be done under the supervision of the group leader or SME.

PHYSICAL FITNESS

32. In order to participate in mountain bike training, cadets must first participate in two periods of introductory training. The physical fitness requirements are outlined in the progression matrix at Annex A for each level of activity.

33. Although physical fitness levels are given as an indication of physical fitness required for the training, this is only a guideline. For Level 2 and 3 training, the aerobic fitness of participants should also be considered when choosing a route. Group leaders who are unsure of the endurance of expected candidates are encouraged to do more Level 2 and 3 training, increasing speed and length of the trip, to ensure success and suitability of candidates at Level 4 and 5. Level 6 requires the highest level of physical fitness and is expected to be the most demanding training level. Instructors should be at least at the same level of fitness as participants and should be setting an example for the whole group.

QUALIFICATIONS, EXPERIENCE AND FITNESS OF LEADERS AND OPI

34. For introductory and Level 1 training, officer staff experienced in mountain biking can instruct training. Ensure that introductory training covers all required material as outlined in this chapter.

35. Since there are no current national authorities on mountain biking it is suggested that local SMEs be sought to aid in training. CANBIKE offers road biking and introductory bike handling training. For group leaders who are not qualified by CANBIKE training at least one level higher than the intended training is required. Group leaders should maintain a higher level of proficiency on the skills being taught than is expected of the cadets. Leaders must set the example for cadets to follow. Fitness level should also be higher than that expected of the cadets.

36. For instruction on care and maintenance, SMEs should be consulted when basic repairs exceed the knowledge of the group leader. All group leaders must be able to perform basic repairs to tires, brakes, and chains to conduct Level 2 and 3 training. For Level 4 to 6 group leaders must be able to repair a bike in remote locations. Major repairs need to be handled by SMEs or through professional bike repair.

37. Bike repair courses can be taken through local cycling shops or through BTAC.

38. For Level 1 to 3 training group leaders must have standard first aid.

39. For Level 4 to 6 training in remote areas the group leader should hold wilderness first aid or wilderness first responder qualifications. Leaders must be able to recognize potentially dangerous situations and maximize prevention in all circumstances. Group leaders must be ready for any circumstance in remote locations and be able to respond in an appropriate and timely manor.

40. Group leaders should have extensive prior experience for the level of training being conducted and personal experience at a higher level than being conducted. The use of SMEs is highly recommended for Level 4 and 5 training. SMEs must be employed at Level 6.

REQUIRED PREPARATORY WORK

41. A complete recce of all training areas is required prior to taking cadets on any mountain biking trip. When physical recces are not possible a map recce will suffice. When a map recce is to replace a physical recce, local SMEs should be consulted to help determine local conditions and difficulty of the terrain. Without exception the group leader shall carry out a physical recee of the training area when Level 6 training is being conducted.

42. Required plans with local authorities/rear party for Level 2 and 3 training group leaders should have a good knowledge of the local conditions. For Level 4 and 5 training it is highly recommended that local SMEs be contacted to help with planning training.

43. Each group must have contact with the safety vehicle. Contact by radio, cell phone or satellite phone can be used.

44. Each group must have at least one map of the pre-determined route. Having one map for the group leader and one for the cadet leading the group is suggested. Also the safety vehicle and any other support vehicles must have maps with the pre-determined routes. All maps should also show emergency evacuation points. Emergency evacuation points are to be given individual and separate names to prevent confusion in case of an emergency.

45. The OPI must be a commissioned officer for all training. Each group must have an officer escort. Senior cadets can, and are encouraged to lead the group, under officer supervision.

46. The OPI must be an officer who is familiar with cadet regulations surrounding training, adventure training, and mountain bike training. The OPI must also exhibit calm leadership skills and be able to recognize dangerous situations. The safety of the entire group, including SMEs is the responsibility of the OPI.

47. SMEs who are employed to help with training must be deemed to be equivalent in experience to at least a platoon commander.

INSTRUCTOR TO CADET RATIOS

48. Refer to progression matrix at Annex A.

MAX AND MIN NUMBER OF PARTICIPANTS

49. The minimum number of participants for any training activity is two plus one officer. Note that in Level 3 training gender specific staff must accompany cadets.

50. Once groups begin a planned route the group will not break up. The training will be conducted as a group. If an emergency situation occurs, all training will cease and the group will remain together until the situation is resolved (refer to emergency planning).

51. The maximum number of participants for any one activity is 30, including all staff. This number does not include support vehicles or the safety vehicle.

52. In cases where fragile environments are being used for training, this number will be reduced dependant on the local conditions. SMEs should be consulted to determine the maximum number of participants in these situations.

MANAGEMENT GUIDELINES

53. All biking should be done in proper formation and the slowest rider should determine the speed of the ride. Put the slower riders near the front of the group, but not as the lead rider.

54. The use of whistle commands is suggested to ensure effective communication.

55. Cadets must be given a stopping procedure prior to conducting training. This should include not remaining on the road while stopped and not stopping on a hill. All stopping should take place on level ground where there is sufficient room for all participants to stop. The exact stop location is to be determined by the lead rider in the group.

56. Cadets must be instructed on proper use of gears to prevent chains from falling off resulting in increased likelihood of accidents.

57. Tires should be pumped to the specifications on the individual tire. Do not over pump the tires or they will be more prone to popping.

58. Be advised that when road conditions change, from pavement, to trails, to gravel braking power will change. Proper braking technique must be taught prior to undergoing training.

59. Leaving enough space between riders is essential while on bikes. More space is required when going up or down hills and in difficult terrain.

TRAINING GUIDELINES

60. All introductory training must be conducted prior to the introductory ride.

61. For Level 2 and 3 training more time must be spent on care and maintenance of equipment. SMEs should be consulted when repairs are beyond the knowledge of the group leader.

TIME OF DAY/YEAR REGULATIONS

62. Level 1 and 2 training must be conducted during the day.

63. Under the guidance of an SME night riding is permitted under special educational circumstances. If night riding is to take place all bicycles must be equipped with front white lights and reflectors, rear red lights and reflectors. In this case all cadets and staff must also wear reflective vests.

64. Mountain bike training will be limited to spring, summer and fall training. Cadets will not ride in snow or ice.

DURATION AND INTENSITY LEVEL OF THE ACTIVITY

65. Mountain biking training will never last longer than originally intended.

66. Maintaining an appropriate level of intensity to complete the training is the responsibility of the group leader. If the original intensity is deemed to be too much for the group the leader will adjust training as required. Any adjustment to training must be relayed to all other groups and to safety/support staff. New plans must also include alternation of emergency planning. For details, refer to the progression matrix at Annex A.

ENVIRONMENTAL CONSIDERATIONS

67. Waste management for personal hygiene, food scraps, food containers and human waste for biking trips and training will follow camping skills of “minimum impact” at minimum and “no trace” in optimum conditions. The impact philosophy of camping and outdoor adventure is established in Chapter 1 and in the RCAC References Book.

68. Groups will be limited by the instructor to cadet ratios. The maximum allowable visitor at campsites will limit size of tripping groups. Special considerations must be given to environmentally sensitive areas, minimal impact must be imposed onto any given environment. Campsites (established or wilderness) should not have to support more than 15 visitors.

69. Environmentally sensitive areas must be respected. In areas of pristine wilderness group size will be limited based on suggestions of local SMEs. Any inadvertent damage to environmentally sensitive areas must be reported to local SMEs. If necessary the corps or group responsible will repair any damage under the direction of the local SMEs.

WEATHER CONSIDERATIONS

70. Location and clothing requirements are to be determined by, and are the responsibility of the group leader. Local weather forecasts should be consulted in advance of the planned training. Seasonally appropriate comfortable clothing is recommended.

ABSOLUTE STOP CONDITIONS

71. If an emergency situation arises all training will be stopped immediately. Training will not resume until the situation has been resolved to the satisfaction of the group leader. All accidents or emergency situations will be reported to the OPI and to the safety vehicle. Protocol for minor and major first aid emergencies will be determined prior to undergoing training. In cases where the safety vehicle can assist they will do so promptly. If an emergency evacuation needs to take place, the safety vehicle and the group will move as quickly as possible to the evacuation point. The safety vehicle will have maps to local hospitals or medical centres with them. If necessary the safety vehicle will contact EMS and will escort EMS to the evacuation point. If EMS cannot reach the evacuation point the safety vehicle will transport the casualty to EMS and will follow EMS to the hospital. Safety at all times is the responsibility of the group leader.

RISK ASSESSMENT AND MANAGEMENT

72. Within this chapter there are some basic considerations for risk assessment guidelines. These guidelines are an outline but this is not an exhaustive list. The assessment of risk in individual situations is the responsibility of the group leader:

a. temperature;

b. equipment;

c. age, and experience of participants;

d. local weather conditions; and

e. skill level of the leader.

DEBRIEF

73. The personal challenges each participant will meet can be discussed in a learning/supportive environment. Group leaders should be especially aware of difficulties some participants may have encountered and use judgment in adapting group debriefs. It may be more appropriate to discuss some issues in private. Depending on the intensity of the experience, some participants may require some personal time or a team activity immediately following activity. Staff, especially developing leaders will require special attention and debrief.

LOGBOOK

74. In order to progress to other/different mountain bike levels, participants will have to keep a record of their experience in the form of a logbook. Logbooks and journals are especially appropriate for the purpose of review and reflection in mountain bike activities since most participants will experience very different and personal things. A logbook or a journal offers the opportunity to log all the appropriate information and the many important details of the caving activity. Either the OPI or the SME/mountain biking leader must sign off logbooks if they are to be used as an assessment of performance or experience.

ANNEX A

MOUNTAIN BIKE PROGRESSION MATRIX

Age	Star Level	Intensity of the Activity	Delivery Method	Progression of the Activity	Level	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-18	Green to NSCE	Famil	Lecture	2 x 40-min Periods	Level 1	None	25	1:20	LHQ	First Aid	Detachment
12-18	Green to NSCE	Famil	Lecture	1 x 40-min Period (Note 1)	Level 1	None	25	1:20	LHQ	First Aid	Detachment
12-18	Green to NSCE	Famil	Familiarization Ride	30-60 min	Level 1	None	30	1:10	LHQ	First Aid	Detachment
14-18	Red to NSCE	Intermediate	Day Trip, Road	1 Day, 40-60 km (Note 2)	Level 2	Bronze	30	1:10	LHQ/Zone/ Region	First Aid	Detachment/ Region
14-18	Red to NSCE	Intermediate	Day Trip, Off-road	1 Day, 40-60 km (Note 2)	Level 3	Bronze	30	1:10	LHQ/Zone/ Region	First Aid	Detachment/ Region
15-18	Silver to NSCE	Advanced	Multi-Day Trip Road	3-4 Days, 40-60 km (Note 2)	Level 4	Silver	30	1:10	LHQ/Zone/ Region	Wilderness First Aid or Wilderness First Responder Qualifications	Detachment/ Region
15-18	Silver to NSCE	Advanced	Multi-Day Trip Off-road	3-4 Days, 40-60 km (Note 2)	Level 5	Silver	30	1:10	Zone/Region/ National	Wilderness First Aid or Wilderness First Responder Qualifications	Region/ National
16-18	NSCE	Advanced	Multi-Day Trip Off-road	4+ Days, 40-60 km (Note 2)	Level 6	Gold	30	1:05	Zone/Region/ National	Wilderness First Aid or Wilderness First Responder Qualifications	Region/ National

NOTES

1. Additional care and maintenance periods of instruction are suggested for multi-day trips.

2. 40-60 km depending upon the terrain and difficulty of the trip.

Figure 8A-1 Mountain Bike Progression Matrix

ANNEX B

NATIONAL AND PROVINCIAL CYCLING ASSOCIATIONS

Alberta Bicycle Association
Executive Director: Shannon Fikkert
11759 Groat Road
Percy Page Centre
Edmonton, AB T5M 3K6
Telephone: 780-427-6352
Fax: 780-427-6438
Email: office@albertabicycle.ab.ca
Website: www.albertabicycle.ab.ca

Bicycle Newfoundland and Labrador
President: John French
P.O. Box 2127, Station C
St. John's, NF A1C 5R6
Telephone: 709-754-1800
Fax: 709-754-2701
Email: bnl@bnl.nf.ca
Website: www.bnl.nf.ca

Bicycle Nova Scotia
Administrator: Ike Whitehead
P.O. Box 3010 South
Halifax, NS B3J 3G6
Telephone: 902-425-5450, ext. 316
Fax: 902-425-5606
Email: canoens@sportns.ns.ca
Website: www.bicycle.ns.ca

Canadian Cycling Association
702 – 2197 Riverside Drive
Ottawa, ON K1H 7X3
Telephone: 613-248-1353
Facsimile: 613-248-9311
Email: general@canadian-cycling.com

Cycling Association of Yukon
President: Bob Boorman
P.O. Box 6158
Whitehorse, YK Y1A 5L7
Telephone/Fax: 867-668-2321
Email: josee.bob@yt.sympatico.ca

Cycling British Columbia
General Manager: Tanya Camposano
332-1367 West Broadway
Vancouver, BC V6H 4A9
Telephone: 604-737-3034
Fax: 604-737-3141
Email: office@cycling.bc.ca
Website: www.cycling.bc.ca

Cycling PEI
Executive Director: Karen Cameron
P.O. Box 302
Charlottetown, PE C1A 7K7
Telephone: 902-368-4110
Fax: 902-368-4548
Email: cycling.pei@pei.sympatico.ca
Website: http://www3.pei.sympatico.ca/~cycling.pei/

Fédération québécoise des sports cyclistes
Coordonnateur général: Pierre Thibault
4545 Pierre-de-Coubertin
Montréal, QC H1V 3R2
Telephone : 514-252-3071
Fax: 514-252-3165
Email: info@fqsc.net
Website: www.fqsc.net

Manitoba Cycling Association
Executive Director: Mike McKee
200 Main Street
Winnipeg, MB R3C 4M2
Telephone: 204-925-5686
Fax: 204-925-5703
Email: cycling@sport.mb.ca
Website: www.cycling.mb.ca

Ontario Cycling Association
1185 Eglinton Avenue East
North York, ON M3C 3C6
Telephone: 416-0426-7242, ext. 7642
Fax: 416-426-7349
Email: info@ontariocycling.org
Website: www.ontariocycling.org

Saskatchewan Cycling Association
Executive Director: Warren Lister
2205 Victoria Avenue
Regina, SK S4P 0S4
Telephone: 306-780-9289
Fax: 306-525-4009
Email: cycling@ucomnet.unibase.com
Website: www.saskcycling.ca

Velo New Brunswick
President: Aaron Hershoff
P.O. Box 3145
Fredericton, NB E3A 5G9
Telephone: 506-773-7542
Email: hershoff@nbnet.nb.ca
Website: www.velo.nb.ca

CANBIKE Website: http://www.canadian-cycling.com/English/home.htm. Retrieved 25 October 2006.

CHAPTER 9

ORIENTEERING

DESCRIPTION OF ACTIVITY

1. Orienteering is the competitive sport of finding one's way between specified points across rough country, usually in unfamiliar terrain, using a map and a compass. Orienteering's navigational skills are easily combined to other adventure activities such as bicycling, canoeing, cross-country skiing and hiking. The Canadian Orienteering Federation classifies orienteering into the following categories:

a. **Open or Class B Meets.** Beginner or recreational participants that do not have the age specific orienteering skills to participate in Class A meets.

b. **Class A Meets.** The advanced class of orienteering competition, competitors must participate in age and gender specific categories, the level of difficulty is linked to the age/gender classifications. It is explained in this chapter.

c. **Elite Classification.** For special elite level competitors usually at national and international competitions that may be considered special instead of Class A.

AIM OF ACTIVITY

2. Orienteering offers the perfect opportunity for hands-on application of map and compass work but is not limited to an extension of those skills. Basic orienteering can be done with no compass and simple maps or in a familiar build-up area. Orienteering can also be developed into the sport of competitive orienteering where participants race against one another to complete the route on which they are challenged. Three main skills are developed in orienteering: physical conditioning, concentration and three-dimensional thinking/navigation. Since most of the competition takes place usually for individuals (sometimes pairs or small teams) away from meet officials, the participants are personally responsible for their performance and ethical behaviour. As a result, strong traits of independence, sportsmanship and fair play are developed in orienteering participants.

CANADIAN REGULATIONS CONCERNING SPECIFIC ACTIVITIES

3. The Canadian Orienteering Federation dictates that nothing shall be done to prejudice the goodwill of landowners, lessees or public land administrators where orienteering is taking place. Orienteering participants must not run on or cross newly planted fields or growing crops. Orienteering participants must not damage any property such as fences, ditches and flowers. A participant whose right to be in an area is challenged shall stop, explain their presence, comply with any reasonable request (even abandoning the competition) and inform the challenger of the location of the nearest meet official. On reaching the finish, a report must be made to the OPI or Meet Director.

MILITARY REGULATIONS

4. Land use of private and public lands must be gained either by the military OPI or by the meet organizers.

CCO SAFETY REGULATIONS

5. The CCM will only participate in orienteering meets sanctioned by the Canadian Orienteering Federation (COF), its provincial/territorial/international partners or in events planned specifically by the CCM.

AUTHORITY LEVEL

6. Since there are very few inherent risks involved with the sport of orienteering, as applied by the COF, every level of this activity should be available at the LHQ, zone and regional level. Appropriate authority for those levels of activities must be granted. Larger multi-skill and multi-day events using orienteering, such as "adventure challenge" races must be authorize by the regional headquarters.

GOVERNING BODIES

7. The governing bodies are:

a. The Canadian Orienteering Federation
P.O. Box 62052, Convent Glen P.O.
Orleans, ON K1C 2R9
Telephone: 403-283-0807
Fax: 403-451-1681
Website: www.orienteering.ca

b. **Provincial Partners.** A full list of the provincial orienteering associations and local clubs is available on the COF Website.

c. International Orienteering Federation at www.orienteering.org.

EQUIPMENT REQUIREMENTS

8. The skills and sport of orienteering can be applied to many other activities, e.g. route marches, cycling, paddling and winter outdoor travel. The list below identifies the necessary equipment for the sport of orienteering by itself; other activities combined with orienteering will require additional equipment.

9. The following is a list of personal equipment required for training and competitive orienteering:

a. comfortable footwear (usually sturdy running shoes);

b. long sleeves and pants to protect from bugs, sun and branches;

c. map of the area indicating boundaries;

d. compass;

e. watch; and

f. safety whistle.

10. The following is an equipment list required for orienteering in general:

a. markers called controls with punches (either official COF controls or reasonable reproductions);

b. participant control cards;

c. flagging tape to mark off boundaries and glow stick for night orienteering;

d. washroom facilities;

e. water/fluid for replenishment; and

f. first aid equipment in sufficient quantity and type for the activity.

RECOMMENDED EQUIPMENT LIST

11. The following is a list of recommended equipment for the participation in orienteering activities:

a. comfortable clothes that offer protection against the elements as expected during the activity;

b. rain and wind wear;

c. hats;

d. orienteering specific maps and compasses;

e. start and finish line administration/registration requirements; and

f. sunscreen and insect repellant.

RATION REQUIREMENTS

12. Although the sport of orienteering can be practiced in endurance competitions spanning over several hours and days, this instruction covers the traditional application of the sport of orienteering, usually taking place in half-day session or evenings. If orienteering competition span over meal hours, then meals must be supplied or carried by the participants.

13. It is common for participants of orienteering activities to have high-energy food, easily prepared and digestible in a pocket or knapsack. In other events, it may be more practical to have meals served completely separate from the orienteering activity.

14. Fluids must be available in large quantities for the competitors and support staff. In longer events, competitors should carry water bottles or fluid stations must be available on the course.

TRANSPORTATION REQUIREMENTS

15. Access to and from the training area must be permitted freely and a safety and evacuation vehicle must be present at the closest vehicle access point.

CADET SKILL LEVEL

16. The basic skills of orienteering should be made available to every cadet. The development of advanced orienteering skills such as armchair techniques however should be introduced progressively to every cadet wishing to participate. Orienteering should be delivered with a “go as fast as you like” approach that does not force cadets into competitive situations. Cadets demonstrate a much better attitude towards orienteering when given the opportunity to develop confidence through positive experiences.

17. Cadets do not require any qualifications, experience or specific level of physical fitness to participate in orienteering. A natural progression however must be used for competitive activities. Cadets should place in reasonable finish positions during Class B meets prior to competing in Class A, age level or elite level meets. Also, the level of difficulty for a course will usually be linked to the age of the participants. At first, participants should be guided to compete at their “challenge” level instead of age level categories. Cadets competing in Class A meets will need to become certified members of COF.

18. Refer to the progression matrix at Annex A.

PHYSICAL FITNESS

19. There are no specific physical fitness levels required for participating in orienteering.

QUALIFICATIONS, EXPERIENCE AND FITNESS OF LEADERS AND OPI

20. Orienteering can be a relatively simple skill to teach. It can also develop into an intense coaching certification, meet official training and skill development program. Anybody with a basic exposure to orienteering can teach the basic skills but since many safety factors must be taken into considerations, only qualified orienteering instructors or COF meet officials can organize an event.

21. COF (and provincial partners) executive officers and Class A organizing officials with at least five years of experience or Level 2 technical officials certifications are considered SMEs. SMEs should be sought to advise units, zones and regions on course design, map development and championship competitions.

22. There must be at least a first aid qualified staff person present at the orienteering activity. In competitions of long duration (more than 4 h), mass numbers of competitors (75 or more) or endurance events, medical staff appropriate for number and types of expected injury is required.

INSTRUCTOR TO CADET RATIOS

23. The basic skills of orienteering can be instructed in a one instructor to 10 cadets ratio. For supervision at competitions, there should be a 1:10 instructor to cadet ratio. It is required to have at least two instructors available, one of which must act as a contact point – manager at the start point and the other at the finish. If extra staff personnel are available, some should run the course or be stationed at/near control points along the course.

MAXIMUM AND MINIMUM NUMBER OF PARTICIPANTS

24. The resources available dictate the maximum and minimum number of participants. However, be aware that like in other skills, the smaller the group, the more hands-on and the better the learning experience. In order to maximize the value of the orienteering experience, only 20 beginners from an organized group should be initiated to orienteering in a meet. Relatively small meets should be sought (approximately 50 competitors).

MANAGEMENT GUIDELINES

25. **Arrival at the Orienteering Meet.** Competitors should arrive together or at least rendez-vous 45 minutes prior to the start of the competition. All participants should attend the beginner's clinic prior to the race. Having a variety of instructors developing orienteering skills in cadets is an easy way to enrich the knowledge and experience of the participants. Beginner's clinics are a great way to give theoretical information to the participants in short, efficient sessions. They will also develop greater confidence in their abilities and gain valuable information regarding the orienteering course being run that day.

26. **Level of Competition.** Many cadets may wish to participate in competitive orienteering meets right away. Unless specific skills have been developed, staff should direct orienteering beginners to open or recreational competition. Although senior cadets may have very good map and compass skills, they may not possess enough "competition-orienteering" specific skills (i.e. physical fitness or concentration) to be successful at first. Initiate cadets to competitive orienteering gradually.

27. **Selection of Cadets.** Since orienteering at a competitive level is optional training, it is important that LHQ and zones staff recognize those cadets who want to participate and those who do not wish to participate.

28. **Level of Participation**

a. Cadets participating in COF orienteering events should be encouraged to participate in gender and age-specific level categories. The COF regulates the following categories:

(1) Age (as of 12-31) Male and Female:

(a) **Junior** 12 and under M 12, F 12.

(b) 13, 14 M, 14 F.

(c) 15, 16 M, 16 F.

(d) 17-19 M, 19 F.

(2) **Senior** 20-34 M, 20 F.

(3) **Master:**

(a) 35-44 M, 44 F.

(b) 45-54 M, 54 F.

(c) 55-64 M, 64 F.

(d) 65+ M, 65 F.

b. Orienteering activities and events organized by the CCM outside of the COF umbrella; either at the LHQ, zone or regional level, should establish skill level categories.

29. If Green Star level 12-year-old cadets are participating, it may be more practical to have them compete in the 13-14 years old category so they compete with their peers from cadets. It could be detrimental to the feeling of accomplishment and self-confidence to have 12 years old separated from their teammates and made to compete with very young competitors (8-10 years old) outside of the Cadet program. It is also possible that some 17 years old may not have enough orienteering skills to compete against the general orienteering population in that age category. If cadets are to compete in categories outside of their age specific levels, the meet officials must grant prior permission and the cadets must understand that they may not be considered for medals.

30. **Level of Difficulty.** Instead of using set distances or a specific number of controls, the COF organized the levels of difficulty in orienteering courses according to the expected winning times. Difficulty levels span from Level 1 to Level 8. The course and the position of the controls become more difficult as the levels grow. Generally the controls of a Level 1 course will be set along trails, fields and be positioned close to simple handrails. Higher-level courses would have longer legs and provide complex route choices; they could require crossing features instead of following along them. The vegetation density could make the navigation more difficult and control point may not be located directly at prominent objects. The COF uses the following guidelines:

a. Course categories winning time in minutes:

(1) **Level 1.** F 12, M 12, 25 min.

(2) **Level 2.** F 13-14, M 13-14, 30 min.

(3) **Level 3.** F 15-16, M 15-16, 45-50 min.

(4) **Level 4.** F 55-64, F 65+, M 65+, 50 min.

(5) **Level 5.** F 17-19, F 45-54, M 55-64, 50-55 min.

(6) **Level 6.** M 17-19, F 35-44, M 45-54, 55-60 min.

(7) **Level 7.** F 20-34, M 35-44, 70 min.

(8) **Level 8.** M 20-34, 90 min.

31. **Contacts and Recces.** Units participating in COF organized meets should establish contact prior to the event and explain their specific situations. Entrance fees may be waved for a lump sum purchase of maps in “open/recreational” or Class B meet events. It may also be possible for cadets to participate in one or two different versions of meets (e.g. a short course in the morning; a longer course in the afternoon; or paired up for recreational night orienteering). This is especially practical if cadets are travelling long distances to attend orienteering activities and they wish to get the most out of their outing. Cadets should arrive for the meet in ample time to get ready, warmed-up and to attend the beginners clinics usually held in conjunction with COF meets at least 45 minutes prior to start of event.

32. **Safety Briefing.** Every participant must attend the safety briefing for every orienteering meet. The briefing must include such vital information as:

a. out of bound areas;

b. safety bearing;

c. absolute finish time;

d. safety rules; and

e. special guidelines as they apply to the particular course.

REQUIRED PREPARATORY WORK

33. **Required Plans With Local Authorities.** COF meets are organized in communication with local authorities and land owners. If CCM orienteering meets are organized, they should follow the COF protocols. If other activities are organized using orienteering skills without using the COF format of competition, proper safety and land use agreement plans must be established.

34. **Emergency Contacts.** Due to the short duration of orienteering events, it is not usually necessary for the group to carry a method of contact for other people to contact them. It is required however that at least one method of contact for emergencies be present with the group (i.e. cellular phones, handheld radios with a link to a base camp or quick access to pay phones).

NECESSARY PLANNING

35. **Emergency Plans**

a. The whistle shall only be used by a participant in distress:

(1) in case of serious injury or medical emergency;

(2) if darkness is imminent; or

(3) after being lost for one hour, having made all reasonable attempts to return to the finish.

b. Misuse of the whistle will result in disqualification from the event.

36. **Search for Overdue Orienteers.** The COF has a detailed plan, initiated in two phases that deal with overdue orienteers. SMEs filling the roles of meet directors or senior official must be appointed during the planning phase as the person responsible for activating rescue sequences for overdue orienteers.

TIME OF DAY/YEAR REGULATIONS

37. Orienteering usually take place early on the day of the meet, from early spring to late fall of each year. Due to sowing/harvest seasons, mating seasons and hunting seasons, orienteering may be suspended in certain areas periodically. It is possible to participate or organize orienteering events outside of those typical times as long as the necessary planning and preparation has taken place.

DURATION OF THE ACTIVITY

38. Most orienteering activities such as the ones expected with COFs meet will last from 20 minutes to three hours. Other applications of orienteering may however extend outside the normal time line: a daylong trek/challenge exercise, team events or a multi-day course completed either by mountain bike or canoe. Whatever the format, a time line must be made very clear to all participants and staff. “Must finish” times must be adhered to and search for lost cadets must be initiated as early as possible in the case of a missing person.

39. It is possible to use the basic principles of orienteering in the application of an “adventure challenge” race. The length of time over which the competition or event must be limited to 18 hours maximum in the case where sleep deprivation occurs. The age level of cadets participating in such an activity must be appropriate for the level of duress under which the activity will take place. Teenagers are not emotionally and physically developed for ultra-marathon race events that include difficult environmental conditions, sleep deprivation and technical skills. Many safety aspects of such an event must be modified to accommodate the age and the level of preparedness of the cadets. If a multi-day challenge race is organized and allow for at least eight hours of rest per 24-hour period, the race should still not extend over three days. A non-race event shall be considered as a multi-skill expedition and durations according to the main transport skill will be used to grant the authority to proceed with the activity.

ENVIRONMENTAL CONSIDERATIONS

40. Specific environmental considerations for orienteering have been discussed as part of other regulations in this chapter.

WEATHER CONSIDERATIONS

41. Many aspect of orienteering are influenced by the weather. Case specific decisions must be made to delay, cancel or continue with the meet. Military personnel OPI and meet director must each make a decision according to the conditions specific for the group participating. It may be that some competitions proceed but some or all the cadets are not allowed to take part, depending on the conditions, available resources and equipment.

42. If a decision is made to carry on with an orienteering activity during poor conditions, the participants must use the appropriate clothing according to the conditions. If such clothing is not available, then the OPI must withdraw the cadets from the competition and provide shelter or return to LHQ.

LIMITATIONS

43. The following conditions warrant a re-assessment of participation, if the risk is likely that the conditions will interfere with the orienteering, the activity must cease, delay or be cancelled:

a. dangerous or unplanned weather; lightning, flood possibilities;

b. conflicting or dangerous activities in the area, e.g.:

(1) proximity to ranges;

(2) hunting;

(3) car rallies; and

(4) suspicion of dangerous animals.

RISK ASSESSMENT AND MANAGEMENT

44. This chapter however has identified very specific safety guidelines and safety considerations to be included in every level of risk managements. The following list of factors is not exclusive:

a. classification of the orienteering event, access and authority governing it;

b. temperature and weather forecast;

c. first aid and safety equipment available and required;

d. age, experience and preparation of the participants; and

e. leadership and SMEs.

DEBRIEF

45. Both cadets and staff should be debriefed after an orienteering event. Often, winners of such competitions will feel a certain amount of accomplishment but the other participants may require more input. It is difficult to equate a finish time with an actual performance. Cadets may benefit from a one on one debrief identifying the quality of their performance for example on accomplishing most of the controls correctly.

LOGBOOK

46. In order to progress to other/different orienteering events, participants will have to keep a record of their experience in the form of a logbook. Logbooks and journals are especially appropriate for the purpose of review and reflection in orienteering events since most participants will experience very different and personal things. A logbook or a journal offers the opportunity to log all the appropriate information and the many important details of orienteering events. Either the OPI or the SME/orienteering events leader must sign off logbooks if they are to be used as an assessment of performance or experience.

ANNEX A

ORIENTEERING PROGRESSION MATRIX

Age	Star Level	Intensity of the Activity	Delivery	Progression of the Activity	Class of the Activity	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Authority
12-14	Green to Gold (Note 1)	Familiarization/ Basic	Day Instruction	Recreational/ Open Category	Level 2	1 to 4	None	Max 20	1:10	LHQ	Detachment
13-15	Red to Gold (Note 1)	Familiarization/ Basic	Day Instruction	Open/ Class B	Level 2 to Level 3	1 to 7	None	No Limit	1:10	LHQ/Zone	Detachment/ Region
14-16	Silver to Gold (Note 1)	Basic/ Intermediate	Day Instruction	Class B	Level 2 to Level 3	1 to 7	None	No Limit	1:10	LHQ/Zone	Detachment/ Region
15-17	Gold (Note 1)	Intermediate/ Advanced	Day Trip	Class A – Age Level Specific	Level 5 to Level 6	1 to 7	Bronze (Note 3)	No Limit	1:10	LHQ/Zone	Detachment/ Region
16-17	NSCE & MC	Advanced	Day Trip	Class A/ Elite – Age Level Specific	Level 5 to Level 6	1 to 7	Bronze (Note 3)	No Limit	1:10	LHQ/Zone	Detachment/ Region
17-18	NSCE & MC	Advanced	Day Trip	Class A/ Elite – Age Level Specific	Level 5 to Level 6	1 to 7	Bronze (Note 3)	No Limit	1:10	LHQ/Zone	Detachment/ Region

NOTES

1. Gold Star level in this chart includes NSCE and MC unless those levels are identified separately.
2. Any new participant should first experience an Open/Class B meet prior to submitting to Class A age categories.
3. The physical fitness level identified is not a requirement, but a recommendation.

COF MEET CATEGORIES

1. Open/Recreational
2. Class B
3. T Class A – Age Level Specific
4. Elite – Age Level Specific

Figure 9A-1 Orienteering Progression Matrix

ANNEX B

REFERENCES

Major Chapman, J.R. *Orienteering an Aid to Training*. London, England, The Cadet Supply Department, 1968.

Orienteering "B" Meet Organizing Manual. Orleans, The Canadian Orienteering Federation, Revised 1998.

Orienteering Level 1 Coaching Certification Manual, *NCCP*. Ellis, M. (Ed), The Canadian Orienteering Federation, 1983.

Orienteering Level 2 Coaching Certification Manual, *NCCP*. Lowry, R. (Ed), The Canadian Orienteering Federation, 1985.

Stott, W. *Armchair Orienteering: A Practical Guide to Reading Orienteering Maps*. 3rd ed. Orleans, The Canadian Orienteering Federation, 1992.

Stott, W. *Armchair Orienteering II: A Practical Guide to Route Planning*. Orleans, The Canadian Orienteering Federation, 1987.

Stott, W. *Beyond Armchair Orienteering: A Practical Guide to Creating Orienteering Drills*. Orleans, The Canadian Orienteering Federation, 1993.

CHAPTER 10

RAFTING

GENERAL

1. Rafting, one of the paddling sports, is a method of river travel using an inflatable watercraft propelled by a group of paddlers.

2. The activity of rafting is not yet regulated by a recognized national/international association. Associations and civilian companies do exist, however, that offer this type of activity. This chapter will provide a list of recommended associations, including member companies, that offer this activity. Of course, many other companies offer this service as well, but they are not recognized/recommended owing to their safety standards.

3. As a rule, the activity takes no longer than one day and does not require sleeping outdoors. Certain companies may, however, offer packages involving several days of rafting, including nights spent outdoors. In such cases, norms, standards, and requirements become more stringent with respect to equipment, qualifications, skills, experience and safety.

4. All the recommended rafting companies are required to belong to one of the associations listed at paragraph 26., although they do not define all the parameters governing this activity.

5. In developing the guidelines governing this activity, we referred to the parameters cited in the chapter on paddling activities and to the criteria and parameters of the associations enumerated at paragraph 26.

PURPOSE OF THE ACTIVITY

6. In addition to the objectives in the chapter on paddling, rafting focuses on team spirit, stress management, decision-making, communication, physical fitness, paddling skills and the discovery and admiration of the cultural and natural riches found along the shoreline.

CANADIAN REGULATIONS[1]

7. The recommended associations regulate certain safety norms and standards governing rafting. Consequently member-rafting companies are advised to submit an evacuation plan to the association evaluator for each river they use. This evacuation plan should address the following issues:

a. communication;

b. transportation of injured persons off the river;

c. transportation of injured persons to a medical facility; and

d. sites for evacuation off the river.

8. The evacuation plan must be approved by the association evaluator based on the following conditions:

a. Indicators for gauging and evaluating water levels must be placed at strategic points along the rivers where excursions are planned.

b. Statistics and data on the average daily water flow on rivers where excursions are planned must be procured from the provincial environment ministry, and excursion guides and leaders must be supplied with this data.

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1 Based on the standards of the Canadian Rivers Council (CRC).

c. Equipment and services must be provided in accordance with established standards.

d. Associations must be allowed to inspect the company's equipment and service records.

e. All equipment must be inspected before commencing daily operations.

f. There must be sufficient personnel who are qualified according to the standards and fulfill the responsibilities of guides and excursion leaders.

g. Participation must be limited to persons who meet the prerequisites listed at Annex A.

h. Participants are encouraged to submit their recommendations and complaints to the association of which the company is a member.

i. The company must possess liability insurance worth at least one million dollars per event and covering bodily or material damage to its paid employees or volunteers **or to participants**.

9. All companies, organizers, excursion leaders or guides are required to complete a service record indicating all days and excursions completed. The record must contain the following elements:[2]

a. the date of the excursion;

b. the duration of the excursion;

c. the name of the excursion leader;

d. the number of participants;

e. the route taken and section of the river;

f. the type of raft and means of propulsion; and

g. any unusual events or incidents.

10. The daily logbook must be approved and signed by the excursion leader.

11. The company logbook must contain certification papers covering first aid and cardiopulmonary resuscitation for all guides and excursion leaders.

CCM REGULATIONS

12. The above regulations conform to DAOD 5031-10, CFAO 50-04 and A-CR-CCP-030/PT-001. It is worth noting that DAOD and CFAO override all other publications, and we recommend that they be consulted during the planning phase of your activity.

13. **Prerequisites for Participation.** CCM members are eligible to participate in an excursion if they sign the participation form at Annex A.

14. Participants must also complete and sign the medical questionnaire at Annex B before leaving on the excursion. **Any person answering in the affirmative to any of the questions at Section A of the medical questionnaire may not participate in a rafting excursion.**

2 Based on the standards of the CRC.

15. If the person is below 18, the holder of parental authority must also sign the above two documents.

16. Participants must be equipped with a protective helmet, life vest and wet suit compliant with the established standards. They must certify that they are not under the influence of drugs, alcohol or any illicit substance.

17. **Information for Participants.** Before descending the river, participants must be informed of the inherent risks and proper procedures associated with this activity. The information conveyed must cover the following issues:[3]

a. the potential risks associated with swift water and the environmental conditions;

b. proper procedures during the descent;

c. requisite precautions;

d. the purpose of the life vest and protective helmet and the relevant procedures; and

e. proper procedures to be followed after capsize and other incidents that may occur while rafting the river.

18. **Preparations.** Before commencing any rafting activity, we recommend that you consult A-CR-CCP-030/PT-001 on safety standards. A general outline of the safety standards include:

a. Shoes should be attached to the raft wherever possible.

b. All participants must wear life vests IAW A-CR-CCP-030/PT-001.

c. Inflatables must be equipped with multiple air chambers.

d. Watercraft/rafts should never be overloaded.

e. Watercraft/rafts must have fore or aft mooring lines that are at least 8 ft in length.

f. Rafts must be equipped with sturdy handholds.

g. There shall be a minimum of one guide for every four participants.

h. Rescue drills should be planned, and these drills should be practiced.

i. Special precautions should be taken when crossing large expanses of water. As a rule, no crossings should be attempted during violent wind storms.

j. The party must be equipped with manual illuminating flares.

k. No travelling should be done at night or in conditions of reduced visibility on navigable rivers, estuaries or lakes.

l. All rafts and watercraft must be equipped with a repair kit (Annex C), an extra paddle and an anchor.

m. A first aid kit is indispensable (Annex D).

3 Based on the standards of the CRC.

19. No one should straddle the raft's outside tube while navigating a rapids.

20. From the moment the raft hits the water, practical exercises of key manoeuvres should be conducted.

21. Rafting expeditions must comply with Annex E and comprise at least two watercraft and two guides.

22. All rafting trips must take place during the period between dawn and dusk.

23. When a rafting party encounters conditions that would prevent any participant who fell into the water from re-embarking before being swept into the following rapids, the guide or expedition leader must arrange for the presence of one or more of the following on the scene:[4]

a. one or more kayakers;

b. one or more guides on the shore with life-lines; and

c. persons in motorized boats or in rafts downstream from the danger.

24. **Equipment.** The inflatable craft must meet the following safety standards:

a. Be constructed of sturdy materials in good condition.

b. Have a minimum of four buoyancy reserves.

c. Be equipped with a mooring line, except where there is a possibility of entanglement, and either a rope encircling the raft or straps where lines can be attached.

d. Should never be loaded with passengers and equipment whose weight exceeds the manufacturer's recommended load capacity.

e. All mobile equipment, storage boxes and other items that pose a risk to passengers should be solidly secured and stowed.

25. A-CR-CCP-030/PT-001 contains a list of appropriate, required and recommended equipment and clothing to be used when engaging in nautical activities. The specific list for this particular activity is provided below:

a. **Protective Helmet.** It should be capable of floating, protecting the forehead, the superciliary arches, the temple and the back of the head and should have an effective attachment system. It must be approved by the regional authorities and worn at all times.

b. **Life Vest.** It must be worn at all times and meet the standards specified in A-CR-CCP-030/PT-001. Must also be worn on top of all other clothing layers.

c. **Wet Suit.** Participants are required to wear a wet suit when the water temperature is 12°C or lower. It must have a total thickness of 8 mm and must be checked and properly adjusted prior to departure. It should be noted that the CRC recommends wearing a wet suit when water temperature falls below 37°C.

4 Based on the standards of the CRC.

d. **Paddling.** Not every canoe/kayak training facility has the financial ability to purchase and maintain modern aluminum/plastic or graphite composite paddles. If relatively inexpensive wooden paddles must be used, they should be in good condition, and properly varnished. They should also be readily available in large quantities since they are easily broken.

e. **First Aid Kit.** A waterproof first aid kit of appropriate size and type for the paddling group and the activities expected, it must be readily available during training and tripping.

f. **Repair Kit.** An appropriate repair kit for the number and types of craft must be taken on trips and should be available during training.

g. **Outerwear.** Should be warm and wind/water resistant according to weather.

h. **Shoes.** Must be worn at all times. Soft-sole lightweight running shoes or wet-suit booties with good soles are preferable especially if portages are expected. Sturdy sports sandals with solid buckles are acceptable for flat water paddling activities or when difficult portages are not expected. Loose Velcro attachments tend to let go once wet, and therefore are not acceptable.

i. **Safety Line.** In kayaks, the line must be in an accessible container (such as throw bag) so that it is not loose in the cockpit of the boat.

j. **Sound Signal.** A sound signalling device **or** a sound signalling appliance (whistle or air horn).

k. Some types of clothing are not recommended. We refer you to the chapter on paddling activities.

GOVERNING BODIES

26. Only companies belonging to the following associations are authorized:

a. **Lower Kananaskis River Users Association**
Mike Mitrovic
Telephone: 403-678-4919
Fax: 403-609-3210
Email: mike@miragetours.com

b. **Jasper National Parks Professional River Outfitters**
Brian Young
Telephone: 780-852-3777
Email: bkyoung@rmriverguides.com

c. **Canadian Rivers Council**
Sean Mannion, Director
P.O. Box 212
Bryson, QC J0X 1H0
Telephone: 1-819-819-647-3625
Fax: 1-819-647-6760
Email: rafting@cyberus.ca

d. **Professional River Outfitters Association of Alberta**
Ruth Goodwin
Telephone: 403-933-5309
Email: alilrnr@cadvision.com

e. **Parks Administration Ministry of Environment Lands and Parks of British Columbia**
Bob Delziel, Director of District Operations
P.O. Box 9398 STNPROVGOVT
800 Johnson Street, 2nd Floor
Victoria, BC V8W 9M9
Telephone: 1-250-356-0585
Fax: 1-250-356-2509
Email: bob.dalziel@gems5.gov.bc.ca

LEVEL OF AUTHORITY

27. All outings require the approval of the region. The D Cdts must approve all expeditions.

TRANSPORTATION REQUIREMENTS

28. Paddling day instruction and tripping usually requires the transport of raft in a trailer. Drivers must ensure the proper electrical and tow equipment are available in the vehicle towing the trailer. Drivers should be experience at driving with a canoe trailer and must also take the responsibility of their load. All watercraft tie-downs (straps) must be double checked by the driver prior to departure.

29. If trailers are left unattended during training or tripping, proper security arrangements must be made to ensure the trailer will not be stolen or tampered with. Special permissions may be required to leave trailers and vehicles overnight.

30. Safety vehicle/evacuation means may be the same vehicle. If no motorized safety boat is used during a paddling trip, then a safety vehicle must be present at a location closely accessible to the trip leader. The safety vehicle must have appropriate communications means to be in contact with both the trip leader and local authorities. A first aid kit should be left in the safety vehicle at all times.

31. In wilderness settings where no land or water safety vehicle is accessible within three hours, proper arrangements must be made for helicopter evacuations through either search and rescue, the CF, parks services, police/fire department or the national coast guard. If this last option is used, proper communications must be established with the evacuation agency. In this case, communications will usually require satellite phone access and a prepared list of the appropriate phone numbers and emergency procedures.

SKILLS AND DEVELOPMENT OF THE CADET

32. It is recommended before undertaking rafting activities that the participants have previously acquired canoeing and paddling skills on a Level II river.

33. Before undertaking an expedition, it is recommended that participants first have the experience of a canoe expedition on a Level I or Level II river.

34. For a better overall view of their progress, refer to Annex F.

QUALIFICATIONS AND ROLE OF PERSONNEL[5]

35. **Excursion Leader.** The excursion leader must:

a. be qualified as a guide according to standards set within the past two years;

b. if he or she has less than three years' experience as a guide, he or she must have completed training in white water rescues;

c. have completed at least two trips as a guide on the river where he or she is to serve as excursion leader;

d. be capable of repairing a raft;

e. be familiar with swift water rescue and recovery techniques;

f. be acquainted with the region's evacuation trails; and

g. be certified by his or her association. This certification must be renewed every two years.

36. **Guide.** The guide must:

a. be 18 years of age or older;

b. have a valid certificate from a first aid course given by the St-John's Ambulance or the equivalent;

c. have successfully completed, within the two preceding years, a cardiopulmonary resuscitation course offered by the St-John's Ambulance, the Heart and Stroke Foundation of Canada or the Lifesaving Society and have a certificate to that effect;

d. have completed, under the supervision of an excursion leader, 20 white-water rafting trips within the three preceding years;

e. be conversant with the construction of a raft; and

f. have a basic knowledge of the following subjects:

(1) safety and emergency measures, hypothermia and the risks associated with different sorts of routes;

(2) the dynamics of water, of currents and of the movements associated with the interpretation of rapids; and

(3) guides must be certified by their association, and this certification must be renewed every two years (permit).

37. **Kayakers.** Kayakers are assigned to ensure the safety of the participants and must have the following qualifications:

a. be at least 16 years of age;

b. possess a valid certificate from a first aid course given by the St-John's Ambulance or the equivalent;

c. have successfully completed within the two preceding years a cardiopulmonary resuscitation course offered by the St-John's Ambulance, the Heart and Stroke Foundation of Canada or the Lifesaving Society and have a valid certificate to that effect;

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5 Based on the standards of the CRC.

d. be familiar with the evacuation trails; and

e. If they possess less than three years' experience as a guide, they must have taken swift water training.

38. **Responsibilities.** The guide and expedition leader must:

a. ensure that participants meet the prerequisites for participants;

b. brief participants on the precautions to take when approaching rapids;

c. at no time consume or be under the influence of drugs, alcohol or narcotic substances during an excursion;

d. wear an individual flotation vest with a minimum buoyancy of 7 kg (15.5 lb);

e. from the very start of the excursion, drill participants on the principal manoeuvres;

f. before commencing daily operations, inspect and ensure that the facilities and equipment meet established standards;

g. scout the route before the excursion when water levels are abnormally high or when the route is new;

h. before starting the trip, gauge water levels using natural visual indicators and indicators placed by the organizer along the length of the river;

i. cancel the trip or change the section of the river when water levels exceed the standards;

j. cancel the trip if the weather conditions are poor or for any other reason that may compromise the safety of the participants;

k. refuse admission to any individual who, owing to their particular state of physical or mental health, may be affected by a river excursion and to any person who fails to meet the pre-conditions for participants;

l. refuse admission to any person who consumes or is under the influence of drugs or alcohol;

m. conduct the pre-excursion information session for participants;

n. locate and position rescue personnel; and

o. grant or deny permission to participants to go swimming.

INSTRUCTOR TO CADET RATIO

39. The ratio is always one guide to every four participants.

MAXIMUM NUMBER OF PARTICIPANTS

40. A minimum of two inflatable watercrafts must be used, not including the safety kayaks. The number of participants per watercraft is defined by the manufacturer.

ENVIRONMENTAL CONSIDERATIONS

41. Waste management for personal hygiene, food scraps, food containers and human waste for paddling trips and training will follow camping skills of "minimum impact" at minimum and "no trace" in optimum conditions. The impact philosophy of camping and outdoor adventure is established in Chapter 1 and in the RCAC References Book.

42. Groups will be limited to the instructor to cadet ratios. The maximum allowable visitor at campsites will limit size of tripping groups. Special considerations must be given to environmentally sensitive areas, minimal impact must be imposed onto any given environment. It is better to separate large groups into smaller units and space-out the departure of each smaller group so that no large, intrusive group of paddlers block-up section of rivers and shore line. Campsites (established or wilderness) should not have to support more than 15 visitors.

WEATHER CONSIDERATIONS

43. Know the weather forecast.

44. It is permissible to paddle in the rain and fog but if it interferes with reasonable visibility or strong winds accompany the rain then it will be necessary for all craft to return to shore, as soon as it is safe to do so. Paddling distance between craft should be diminished during periods of poor visibility, be aware that precipitation may affect water levels and rapid classifications.

45. There shall be no paddling training or tripping while lightning is present, all crafts are to pull over to the closest shore as soon as it is safe to do so.

46. Although extremely cold or hot temperatures do not interfere directly with paddling, training and tripping must be adapted accordingly, paddling gloves and pogies may be necessary. Special consideration should be given to appropriate clothing such as wet and dry suits, and PFD.

DURATION OF THE ACTIVITY

47. The activity must be conducted between dawn and dusk. For expeditions, refer to the parameters at Annex E.

LIMITATIONS

48. The number of places in the watercraft specified by the manufacturer must not be exceeded.

49. The river's characteristics, notably, its width, plants and animals, may be factors for limiting the number of watercraft on the river.

CONDITIONS FOR HALTING THE ACTIVITY

50. The expedition leader has authority to cancel or halt the activity based on river levels, weather conditions and visibility.

LOGBOOK

51. Participants of a rafting activities are encouraged to keep a logbook of their experiences.

DEBRIEF

52. Both cadets and staff should be debriefed after rafting activity. Often, participants will feel a certain amount of accomplishment or they may require more input.

ANNEX A

PREREQUISITES FOR PARTICIPATION[1]

1 Based on the standards of the CRC.

Section 1 – Agreement Between the Participant and the Outfitter		
Name	**First Name**	**Health Insurance No.**
Address (Street and No.)	**Apartment**	**Telephone No.**
City	**Province**	
Name of Outfitter		
Address (Street and No.)	**Apartment**	**Telephone No.**
City	**Province**	

Section 2 – Participant Statement	
Please read carefully and initial each paragraph.	**Initials**
The outfitter has explained, illustrated and demonstrated to me **to my satisfaction** the nature, risks and dangers of this activity and I accept these risks.	
I am aware that the activity in which I plan to participate is dangerous and may result in the loss of limbs, injury, trauma and death.	
I am particularly aware that while navigating rapids I may be thrown from the boat and fall in the water at any point in the river.	
I hereby state that I intend to participate in these activities at my own risk and that I specifically absolve the outfitter of any responsibility with regard to the losses and material damage that may result from these activities.	
I pledge to follow **all the directives and instructions** issued by the outfitter, his or her guides, monitors or other officials.	

Section 3 – Consent

I declare that I understand all of the clauses in this agreement.

Signature _____ Date _____ Year _____

Outfitter's Signature _____ Date _____ Year _____

Name of Parent or Tutor _____ Signature of Parent or Tutor _____
(Required for participants below 18 years of age)

Figure 10A-1 Prerequisites for Participation Form

ANNEX B

MEDICAL QUESTIONNAIRE[1]

1 Based on the standards of the CRC.

Section A – Medical Condition		
Yes	**No**	
		1. Has your doctor ever told you that you have a heart problem **and** that you should only take part in physical activities prescribed and approved by a medical doctor?
		2. Do you ever experience chest pain while engaging in physical activity?
		3. In the past month, have you ever experienced chest pain at times when not engaging in a physical activity?
		4. Do you ever experience balance problems associated with dizziness or have you ever lost consciousness?
		5. Do you have bone or joint problems that may be aggravated by a change in your level of participation in a physical activity?
		6. Are you currently being prescribed medication to control your blood pressure or a heart problem (e.g. diuretics)?
		7. Are you aware of any **other reasons** why you should not engage in physical activity?

Section B – Are You Suffering From or Have You Ever Suffered From		
Yes	**No**	
		Epilepsy
		Hemophilia
		Psychiatric problems
		Serious allergies (e.g. nuts, peanuts, stinging insects, hypersensitivity to cold)
		Asthma
		Diabetes
		Are you pregnant?
		Have you undergone surgery during the past 10 months?

Section C – Participant Statement	
Please read carefully and initial each paragraph.	**Initials**
I declare that I weigh more than 41 kg (90 lb).	
I declare that I am a satisfactory swimmer.	
I hereby declare that I am not under the influence of alcohol or any drug, and I formally pledge to refrain from using drugs or alcohol during the excursion.	
I hereby declare that I have read, understood and agreed to the provisions in this document and that all the information contained herein is true. Signature _____ Date _____ Year _____ Name of parent or tutor _____ Signature of parent or tutor _____ (Required for participant under 18 years of age)	

Note: If you answered “Yes” to one of the questions in Section A, you must obtain written medical authorization in order to participate in the excursion. If you answered “Yes” to one of the questions in Section B, you must meet with the excursion leader before undertaking the excursion.

Figure 10B-1 Medical Questionnaire

ANNEX C

REPAIR KIT[1]

1. Each raft must have on board a repair kit containing:

   a. sufficient material to repair a 1.5-m tear in the bottom of the raft;

   b. sufficient glue for this same operation;

   c. sandpaper or a tool to roughen the surface;

   d. duct tape;

   e. at least one replacement valve;

   f. a multi-purpose screwdriver;

   g. pliers or vise-grips; and

   h. a booster pump.

1 Based on the standards of the CRC.

ANNEX D

FIRST AID KIT[1]

1. The minimum contents of a first aid kit are listed below:

   a. a first aid manual approved by a recognized organization in the field of first aid;

   b. the following instruments:

      (1) one pair of bandage scissors;

      (2) one forceps – splinter type;

      (3) 12 safety pins (assorted sizes);

      (4) two splints; and

      (5) one respirator with valve;

   c. the following dressings (or the equivalent sizes):

      (1) 25 separately wrapped sterile adhesive bandages (25 mm x 75 mm);

      (2) 25 separately wrapped sterile gauze compresses (101.6 mm x 101.6 mm);

      (3) four separately wrapped rolls of sterile gauze bandages (50 mm x 9 m);

      (4) four separately wrapped rolls of sterile gauze bandages (101.6 mm x 9 m);

      (5) six triangular bandages;

      (6) two rolls of 75 mm wide elastic bandages;

      (7) four separately wrapped sterile compressive bandages (101.6 mm x 101.6 mm);

      (8) a roll of adhesive plaster (25 mm x 9 m); and

      (9) two rolls of 50-g cotton batting;

   d. antiseptic: 25 separately wrapped antiseptic pads;

   e. sugar (dextrose monoject); and

   f. the following equipment:

      (1) one blanket of wool or a moisture-proof insulating material;

      (2) one water-proof lighter or matches; and

      (3) two pairs of latex gloves.

---

1 Based on the standards of the CRC.

ANNEX E

PROVISIONS GOVERNING AN EXPEDITION[1]

DEFINITION

1. An expedition is defined as an excursion of several days in an area where the downstream distance from the point of departure to the nearest passable road, inhabited town or radio outpost exceeds 100 km.

STANDARDS

2. Each raft must be equipped with a first aid kit, as indicated at Annex D.

3. Each raft must be equipped with a repair kit as indicated at Annex C.

4. All participants must be apprised of the isolation and potential difficulties in obtaining medical care; consequently, it is not recommended that persons suffering health problems undertake major expeditions. The notice should contain a strong recommendation that participants undergo medical exams prior to departure.

5. In addition to the appropriate provisions for the expedition, all watercraft must carry emergency reserves, survival gear and illuminating flares.

6. In addition to the requirements outlined in this chapter, guides and expedition leaders must:

   a. be capable of using a map and compass to gauge their position and find their way to nearest the outpost of civilization;

   b. have an intimate knowledge of the geography and dangers of the region;

   c. be physically fit; and

   d. be thoroughly acquainted with other modes of land or water transportation that might prove useful in emergency situations.

1 Based on the standards of the CRC.

ANNEX F

RAFTING PROGRESSION MATRIX

Age	Star Level	Intensity of the Activity	Delivery Method	Progression of the Activity	Class	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	OIC Agency	Technical Instruction/ Leadership	Authority
12-14	Green to Gold (Notes 1 and 2)	Fam	Day Trip	MW	Class 1-2	1 to 6	None	Min of 2 Raft	1:4	LHQ/Zone	Contract With Trade	Region
13-15	Red to Gold (Notes 1 and 2)	Basic	Day Trip	MW	Class 1-2	1 to 6	None	Min of 2 Raft	1:4	LHQ/Zone	Contract With Trade	Region
14-16	Silver to Gold (Notes 1 and 2)	Intermediate	Day Trip	MW	Class 3 and More	1 to 9	Bronze	Min of 2 Raft	1:4	LHQ/Zone	Contract With Trade	Region
17-18	Gold to MC	Advance	Expedition	MW	Class 3 and More	1 to 9	Silver	Min of 2 Raft	1:4	Zone/ Region/ National	Contract With Trade	National

NOTES

1. Gold Star level in this chart includes NSCE and MC unless those levels are identified separately.
2. There is to be no overnight camping gear carried in raft.

Progression

1. Class 1-2 canoe day trip must be done before raft activity.
2. Class 1-2 canoe expedition and raft day trip must be done before raft expedition.

Safety skills

1 Swim with PFD – calm response to direction

2 On-water communication

3 River comms

4 MW swimming – calm response to direction

5 MW self-rescue

6 MW line toss and rescue

7 MW IAs on wet exit – retrieve a swamped raft

8 MW rolling capability 4/5 each side

9 MW raft rescue (conscious victim)

Figure 10F-1 Rafting Progression Matrix

ANNEX G

REFERENCES

Règlement de sécurité du conseil des rivières canadiennes – Rafting, CCR, février 1998.

River Rafting Guide Certification Manual, Registrar of Commercial River Rafting of British Columbia, Ministry of Environment, Lands and Parks, 2001.

CHAPTER 11

ROPES AND CHALLENGE COURSE

DESCRIPTION OF ACTIVITY

1. A ropes and challenge course is any series of supervised individual and group activities that utilize spotted or non-spotted elements/apparatus that have been designed or installed as part of an experiential learning curriculum. Ropes challenge courses can be used for recreational, educational and developmental purposes and are generally designed to foster team-building, group cohesion, cooperation, leadership, problem-solving skills, communication skills, healthy risk-taking and individual commitment.

2. Ropes challenge course programs are experience-based tools through which the power of a group to assist individuals to actualize their potential on all levels may be achieved. This experiential model is effective because it engages individuals in an active, dynamic learning process that allows for immediate feedback and opportunity for change, as opposed to traditional didactic (lecture) models that are passive and rarely maximize the learning curve.

3. Although they may be traced back as far as 1875, rope challenge courses are now constructed of more wood and cable than rope. Challenge courses can be built in either an urban setting (gymnasium, sports field) or in a more natural setting (wooded area). Elements can be built into either treated poles or trees, and different activities can be built at heights varying from 20 cm to 20 m or more above the ground.

4. Ropes and challenge courses can consist of rope bridging, obstacle courses, and group leadership activities.

5. Obstacle courses consist of ground level or low bridge activities grouped together to provide a series of activities for participants to cross.

6. Group leadership activities are those that members of a group must complete as a team.

7. Ropes and challenge courses are divided into two categories:

   a. **Low Ropes Course (Including Rope Bridging).** A low ropes course consists of challenging elements that are built **less than 1.5 m off of the ground** and as such do not involve the use of safety ropes (belays). The safety system used in low element activities is group spotting; which is defined as one or more persons working together to catch, lift and/or physically support a participant without the aid of any specialized equipment. These elements are generally a series of problem-solving experiences that physically engage teams to develop and execute a plan. The challenges, though low to the ground, are more difficult than they appear. Each challenge is designed to draw on every team member's contributions – their ideas, their support, and their efforts. Low ropes courses are generally structured so that the activities gradually increase in level of difficulty so that the team continually extends its aspirations and its reach. The following is a brief list of examples of low elements:

NOTE

This list is not intended to limit low ropes course elements to those shown here, but merely to provide a frame of reference for understanding what a "low" element is.

(1) **Swinging Log.** Individual participants walk across a moving suspended log using peer support if required.

(2) **Logjam.** Small group of participants progress from one end of the "jam" to the other by manoeuvring the suspended logs on the cable.

(3) **Track Walk.** Individual participants walk atop a series of stationary beams arranged at varied heights and angles.

(4) **Criss Cross.** Two participants start walking at opposite ends of two cables (suspended not more than 50 cm above the ground), which are crossed in the middle, they traverse the cable and negotiate the crossing at the centre before continuing to the end.

(5) **Triangle Tension Traverse.** Participants traverse along a triangular cable formation (suspended not more than 1 m above the ground) with the aid of a central, stationary length of rope.

(6) **Wild Woozy.** Two participants must depend on each other to traverse as far as possible along two progressively widening cables (suspended not more than 1 m above the ground).

(7) **Trust Fall.** Individual participants fall backwards from a platform (elevated not more than 1.5 m above the ground) into the arms of the group.

(8) **Hickory Jump.** Individual participants jump from the top of a pole (not more than 1.5 m above the ground) and catch a trapeze while the group spots the participant.

b. **High Ropes Course (Including Rope Bridging).** High ropes course elements vary from balance beams to cable crossings to complex climbing structures that are built **higher than 1.5 m off of the ground**; generally 10 to 20 m. Safety systems for these elements are belay ropes. Most of these elements have a direct relation to climbing skills, as they teach balance, coordination, and concentration. They are the finest of all at teaching participants self-confidence and the understanding of perceived risk. The following is a brief list of examples of high elements:

NOTE

This list is not intended to limit high ropes course elements to those shown here, but merely to provide a frame of reference for understanding what a “high” element is.

(1) **Incline Log.** Individual participants begin at the low end and traverse the length and back of an inclined log.

(2) **Two-strand Bridge.** Individual participants traverse the length of a suspended cable with the aid of a second, higher suspended cable.

(3) **Three-strand Bridge.** Also known as the Burma bridge, individual participants traverse the length of a suspended cable with the aid of two higher, laterally positioned cables (one for each hand).

(4) **High Balance Beam.** Individual participants traverse an elevated balance beam/log.

(5) **Kitten Crawl.** Individual participants traverse two parallel cables in any possible way they devise.

(6) **High Wild Woozy.** Two participants must depend on each other to traverse as far as possible along two progressively widening suspended cables.

(7) **Multi-Vine.** Individual participants traverse the length of a suspended foot cable with the aid of short lengths of rope dangling at varying intervals along the way.

(8) **Heebee Geebee.** Two vertical, crossed cables are attached to the middle of a third horizontal cable. Individual participants traverse the length of the suspended, horizontal cable with the aid of the two vertical, crossed cables.

(9) **Team Beams.** Two participants start to traverse at opposite ends of two suspended poles which are secured in an elongated “X” formation, eventually crossing paths in route to the opposite end of the “X” from which they started.

(10) **Zip Wire.** Individual participants slide down the long length of a single suspended cable with the use of a pulley attached to their harness.

(11) **Power Pole.** Individual participants climb a tall pole, stand on top, and then leap out to grab a suspended trapeze bar.

8. You will find an activity list description at Annex A.

AIM OF ACTIVITY

9. The purpose of ropes challenge courses in CCM is to include a progression of elements, each one building on the skills learned from the last. Each element is modified and adapted to the needs of the group so that each challenge can be learned within an optimal setting. Skills learned include communication, decision-making, planning, trust, risk taking, expressing feelings and more. Each individual participant also benefits in the areas of improved social skills, more independence and self-reliance as well as higher self-esteem.

CANADIAN REGULATIONS

10. There are no Canadian regulations or regulatory bodies at this time. However, the most established, current and widely accepted organization in this respect worldwide is the Association for Challenge Course Technology (ACCT). ACCT is a professional trade association whose mission is to establish and guide the implementation and compliance of standards of quality and safety for the installation, operational programming and instruction as well as ethical practices within the industry.

MILITARY REGULATIONS

11. Civilians may be employed as instructors but must be suitably experienced and qualified in the type of training being undertaken a qualified instructor must directly supervise all ropes and challenge course activities.

CCO SAFETY REGULATIONS

12. Cadets at any level of training under normal supervision may participate in rope and challenge courses as a mandatory support or optional subject at the cadet corps and as a mandatory support/directed optional subject on selected summer courses. Instructors may be CIC officers, members of the Regular or Reserve Force but must be suitably experienced and qualified in the type of training being undertaken. A qualified instructor must directly supervise all challenge course activities.

13. Cadets must be properly briefed before participating in challenge course activities. Although not limited to, a site briefing could include:

a. Welcoming participants to the site and explaining the activities they will be undertaking.

b. Informing participants of the boundaries at the site and “helmet on and helmet off” areas.

c. Informing participants of the designated area that they will wait in while not participating in the activity.

d. Showing and explaining how to wear harnesses including making sure they are above the hips and “doubled back” if need be.

e. Showing and explaining how their safety tethers work making sure to mention that they must be hooked into a safety cable at all times while participating in the activity.

f. Showing and explaining “DOWN, LOCKED, and OPPOSED” with the carabineers, and that participants must communicate to the instructor for verification before proceeding on any bridge.

g. Explaining the system of removal from the course or “ZIP LINE”, if one is present.

h. Asking if participants have pertinent medical history that the instructor should be aware of.

i. Allowing the opportunity for participants to report information about possible safety hazards.

j. Conducting a complete site demonstration of all activities that participants will be expected to partake in.

14. Cadets will also be inspected and quizzed on pertinent site information before they are allowed to proceed onto a ropes and challenge course.

15. From Annexes B to E, you will find all safety regulations.

GOVERNING BODIES

16. There is no national organization regulating rope challenge courses. There are however, many associations, which retail rope challenge course designs, equipment, inspections, training, etc. Of these and as mentioned at paragraph 10., the most widely recognized and accredited is ACCT.

a. Association for Challenge Course Technology
P.O. Box 255
Martin, MI
49070-0255 USA
Telephone: 616-685-0670
Fax: 616-685-6350
Email: acct@net-link.net
Cost: $45 (USD) per year

b. Association for Experiential Education (AEE).

c. American National Standards Institute.

d. UIAA.

EQUIPMENT REQUIREMENTS

17. At Annexes B, C and D, you will find all the details about standards and safety equipment.

18. The following is a list of personal safety equipment and the recommended minimum standards for each as published by ACCT:

a. **Belay Rope.** Must have a manufacturer's rated breaking strength of at least 22.22 kN (5000 lb) when new and must be UIAA/CE approved.

b. **Pulleys.** Must have a breaking strength of at least 22.22 kN (5000 lb).

c. **Carabineers and Rapid Links.** Must have a breaking strength of at least 22.22 kN (5000 lb) and a locking gate. On traversing elements, steel carabiners or Rapid links are required when direct contact is made on wire rope.

d. **Belay Devices.** Must be used in accordance with manufacturer's recommendations.

e. **Harnesses.** Tied seat harnesses (Swiss seat, Algonquin harness) or commercial seat or full-body harnesses are required on all belayed elements. Commercial harnesses must be used in accordance with the manufacturer's recommendations.

f. **Helmets.** Must be UIAA/CE approved.

g. **Personal Fall Arrest Systems.** Shall limit the maximum arresting force on the person to 4.0 kN (900 lb) when used with a seat harness and the limit the free fall distance to no more than 183 cm (6 pi).

19. Safety equipment for the group:

a. first aid kit complete with enough supplies for the number of members in the party and the type of activity;

b. stretcher/litter/backboard; and

c. access to one method of communicating with the outside for help.

20. The following is recommended additional equipment;

a. comfortable, loose fitting clothes; approved CF combat dress;

b. closed toe shoes, hiking boots, CF combat dress boots; and

c. appropriate environmental clothing articles.

RATION REQUIREMENTS

21. Rations may be required for participants at the site if training will take place over a meal. Water should be available for all persons at the site.

22. The nature of rope and challenge course activity does not imply limits to the type of rations that may be consumed. IMPs, box lunches and fresh-rations are suitable for these types of activities. However, most commercial vendors of rope and challenge courses are equipped to provide the necessary meals on-site.

23. Ropes and challenge courses are associated with higher levels of personal stress and concentration. Accordingly, in order to function properly, high-energy foods are required. It is advised to allocate either 1.5 times the amount of food normally required or to supplement the regular amount of food with various high energy products (dried-fruits, cereal bars, chocolate bars, etc.).

TRANSPORTATION REQUIREMENTS

24. Access to and from training area must be permitted freely.

25. A designated and dedicated safety vehicle must be present at the nearest vehicle access point at all times while ropes challenge course training is being conducted and must be ready in the event that a participant needs to be evacuated. A qualified driver will be ready and will be in possession of a minimum of St. John's Ambulance Standard First Aid (or the equivalent) with CPR. The vehicle must be capable of carrying a spine board in the event of an emergency evacuation.

CADET SKILL LEVEL

26. The two skill levels that must be assessed before allowing a participant to take part in challenge course activities are their mental and physical levels. A participant must be aware that they are undertaking an activity they may not normally participate in and that it does pose a mental challenge. Cadets who are deemed unable to meet this requirement will not be allowed to participate in the activity for their own safety.

27. Cadets need to be properly briefed on the code of conduct expected by the ropes Challenge Course Facilitator (CCF) or vendor during the activities prior to the commencement of any activity.

28. To foster the establishment of trust and self-confidence required to maximize his or her experience on the ropes challenge course elements, cadets and staff need to understand the proper handling and function of their equipment and the safety procedures in place while on and around the rope and challenge course. To this end,

the CCF and his or her staff must work to familiarize each participant with the equipment and safety procedures involved. Finally, the CCF will conduct a complete equipment check prior to the initiation of any rope challenge course activity.

29. Although many ropes and challenge course vendors and facilitators regularly introduce high ropes course elements without prior experience on low ropes course elements, this practice is not recommended. During a low ropes course, the focus is on the team. Common practice within ropes challenge course operation is to not provide demonstrations or any other indications of how to approach each element; consequently team development and leadership concepts are learned through personal and group discovery while completing the series of action based learning activities. Activities draw on the knowledge and ideas of every group member and require the participation and cooperation of the entire team for success. After completing each element, staff or CCF personnel should assist each group to reflect upon their experience to explore how they functioned as a team and ways to become more effective prior to moving to the next low course element. This practice of gradual progression in challenge course elements will provide optimum learning as well as facilitate the building of the trust, confidence and communication skills necessary for effective management of high ropes course elements.

30. **Rope Bridging.** With regards to rope bridging, a question that would have to be asked by the instructor to themselves would be “can I trust that this cadet will remain attached to a safety cable at all times?” Cadets under duress may proceed on a bridge without permission or without being attached to a safety cable.

31. Some rope bridges may be easier to cross than others; all participants should construct bridges to allow for maximum participation. Factors to be considered would be the number of bridges that would have to be crossed and their difficulty through either design or incline.

32. Participants will usually only need a short amount of time for introduction to rope bridging. A cadet who can walk and open and close a carabineer should be able to participate in rope bridging.

33. If cadets are going to participate in the actual construction of rope bridging, it is imperative that it be stressed that they should not build unless under the supervision of a qualified/competent instructor. An instructor should verify that cadets have properly built a rope bridge before human life is suspended by it. The construction of rope bridges is something that could be included in adventure training activities, as they can require a minimum of equipment for safe set-up. Thus, this activity would easily go hand in hand with other adventure training activities such as on a canoe or hiking expedition.

34. **High Rope Course.** High ropes courses are designed to provide opportunities for teamwork further than those offered by low ropes courses. High ropes courses do this with the added emphasis on individual challenge while still maintaining the cohesiveness of the team previously established during the low ropes course. The high elements provide opportunities for participants to expand their comfort zones and to overcome fears that can block personal as well as group development. Due to their nature, high ropes challenge course elements should be reserved for cadets that have demonstrated the appropriate attitude and skills on low ropes elements.

35. **Progression Level.** A Progression matrix can be found as Annex E to assist instructors as a quick reference for ease of determining the best activities to choose for the participants to complete.

PHYSICAL FITNESS

36. A ropes and challenge course **is not an assault course**, effective participation does not rely upon fitness and/or physical strength. A professionally designed and constructed ropes course can accommodate people of all ages, as well as those with special needs.

37. It is also rare for success on a ropes course to be measured in terms of how fast it was completed. The nature of ropes challenge course elements is to break down stereotypes among peer groups and promote an individual sense of competence and self-confidence.

38. Physical fitness is a very important characteristic in challenge courses. If an instructor allows cadets who may not be capable of finishing the course to participate, safety issues may occur. The first is that of removing a participant from the course. A “what if” question should be asked by the instructor to themselves to determine, “what if a cadet would not advance on at any part of the course.” The instructor must make sure that a safe plan is in place to account for this possibility. In rope bridging, an easy method for this possibility is to set up a pulley system for each bridge. It is important to note that although pulleys are designed to hold a significant amount of weight, they are not approved to do so. Participants must remain attached to the safety cable at all times.

39. For beginning cadets or those of lower physical fitness, bridges should be kept to a minimum in number and complexity and not involve any inclines.

40. For cadets with a higher level of physical fitness, additional bridges, higher complexity in design, and possibly an incline could be included. Rope bridges with inclines are more dangerous than rope bridges without them. If a participant falls from a bridge that does not have an incline, they will only fall straight down. If a cadet falls from an incline, when the tethers take up slack, their body weight has the potential of forcing the participant to slide down on the safety cable. As such, inclines should not be used for complex bridges such as a one-rope bridge.

QUALIFICATIONS, EXPERIENCE AND FITNESS OF LEADERS AND OPI

41. **SME.** As mentioned previously there is no recognized national organization certifying/qualifying instructors to install and manage ropes challenge courses. However, refer to paragraph 16. for identified bodies of best practice.

42. **Low Rope and Challenge Course.** For the **specific** case of low rope and challenge course (including rope bridging) and under the approval of the RCSU COs, only the instructors considered competent can build, supervise and manage low rope and challenge course activities. By competent, we are referring to an instructor able to demonstrate:

a. a recent knowledge and experience of current low rope and challenge course installation practices as related to participant safety;

b. mastery of all necessary knots for low rope and challenge course installation;

c. the knowledge and ability to properly use all appropriate equipment related to low rope and challenge course (ropes, harness, carabiners, etc.);

d. the ability to conduct activities using sound judgment, working within their individual level of competency;

e. the ability to continually assess changes in the environment which may directly affect participant safety (i.e. weather, hazards);

f. the ability to assess the condition of the environment/equipment/element safety prior to participant use;

g. the ability to teach, implement, supervise and assess properly various techniques to protect the participants;

h. an incorporated communication system between spotter(s) and participant(s) that is clear and consistent;

i. knowledge and ability to belay and assess the appropriateness of various belay techniques related to the activity;

j. the ability to manage participant behaviour to minimize risk;

k. knowledge of site-specific emergency action plan and rescue procedures related to the activity; and

l. an awareness of the impact that low rope and challenge course activities may have on the hydration, nutritional needs and fatigue level of participants.

43. **High Rope and Challenge Course.** Only SMEs in possession of **valid** military (i.e. engineer, pioneer) qualification and/or approved equivalent civilian qualification (i.e. ACCT) can build, supervise, and conduct **high** ropes courses (including rope bridging).

44. Regardless of the origin of the qualification/accreditation/certification (refer to paragraph 16.), rope challenge course SMEs must understand, assume and be formally trained to manage the following:

a. decisions consistent with program safety and operational practices;

b. the conduct of activities using sound judgment, working within their individual level of competency;

c. current rope challenge course installation practices as related to participant safety;

d. continual assessment of changes in the environment which may directly affect participant safety (i.e. weather, hazards);

e. activity selection in an appropriate sequence and conduct programs based on assessment of specific group/individual need, readiness, abilities, emotional states and developmental needs and goals;

f. determining whether spotting or belaying is required to safely manage each activity (in association with the policies and procedures of the ropes challenge course vendor);

g. the ability to assess the condition of the environment/equipment/element safety prior to participant use;

h. instruction, implementation and assessment of the various appropriate techniques of spotting in order to protect participants;

i. a communication system between spotter(s) and participant(s) that is clear and consistent;

j. belaying and assessing the appropriateness of various belay techniques on an activity-specific basis;

k. teaching, implementing, supervising and assessing secured belaying techniques in programs that use participant belayers in a manner that ensures all belayers maintain proper control of the belay rope at all times during the belay;

l. participant behaviour to minimize risk;

m. site-specific emergency action planning and rescue procedures for all elements and that appropriate rescues can be conducted in a timely manner;

n. appropriate participant attire; and

o. hydration, nutritional needs and fatigue level of participants.

45. **General.** Instructors must be mentally prepared to both construct and operate a rope bridge site. Instructors must be proficient in knot tying, the application of safety cables, abseiling techniques, the application of harnesses, and tightening procedures for ropes and safety cables. The higher a rope bridge site is, the more complex it is to run and operate. Construction of a rope bridge that is high, involves ascending a ladder while carrying equipment that may be heavy.

46. An instructor must also be willing to accept the responsibility for the lives of cadets who could be 40 feet in the air and away from the instructor. If the instructor is not confident in their ability to either set up or operate a site, they shall not do so.

47. Instructors must be adaptable to the changes that occur in the construction and operation of a ropes bridge/course. They must be willing and motivated to work with a variety of unique participants and have the ability to coach them to the successful accomplishment of the course.

48. **Medical/First Aid Qualifications (Ratios of Qualified Personnel).** At least one person must be standard first aid qualified for low ropes course element training activities (including rope bridge under 1.5 m). At least one person, other than the SME/activity leader must be standard first aid qualified for high ropes course element training activities (including rope bridge above 1.5 m).

49. **Overall Experience – Command.** The OPI must be military personnel with command experience to at least a Platoon Commander; this is a requirement even if a civilian SME is acting as rope bridge and/or CCF or activity leader. The OPI must be familiar with general safety rules and protocols in training cadets; have demonstrated calm leadership skills and able to recognize dangerous factors.

REQUIRED PREPARATORY WORK

50. The OPI should obtain a copy of the ropes challenge course vendor's insurance and liability coverage policy. A copy of this shall be forwarded with any requests for approval to higher authorities requesting authorization for the activity.

51. Due primarily to the versatile nature of ropes and challenge course training, at least the OPI must have prior knowledge of the facilities and elements offered by the ropes challenge course vendor. In addition, clear communication of program goals and specific objectives should be outlined by the OPI for the ropes challenge course vendor and/or CCF.

52. Emergency and evacuation plans will pre-exist for each ropes and challenge course training site, confirmation and details of this plan, and how the OPI and his or her staff are incorporated into this plan, must be received by the OPI prior to the commencement of any challenge course activity.

53. A sample emergency/evacuation plan is located at Annex F. It is important to keep in mind that it is only a reference and an instructors' emergency/evacuation plan is not limited to the example as theirs will be site and situation specific.

54. The instructor must also plan the procedure they will follow in the event that a participant needs to be assisted or rescued while participating. Someone must be in a harness and helmet, ready to go onto the course to accomplish this.

55. **Recces.** At the time of the recce, the OPI should also obtain a copy of the rope and challenge courses most recent safety inspection report and/or the following critical items of information (a copy of this shall be forwarded with any requests for approval to higher authorities when requesting authorization for the activity):

a. date which the safety inspection was performed;

b. inspection company and inspector's name;

c. previous safety inspection information;

d. listing of all elements and activities inspected, including but not limited to:

(1) belay ropes;

(2) life support lanyards;

(3) harnesses;

(4) helmets;

(5) carabineers and rapid links;

(6) belay devices;

(7) pulleys and shear reduction devices;

(8) element access ladders; and

(9) the condition of each element at the time of the inspection.

56. **Necessary Planning.** Prior to the set-up of challenge courses, the instructor will inspect the site. The following requirements must be met:

a. Bridge selection will be site specific and designed to ensure maximum participation for cadets based on their mental and physical limitations.

b. Areas around the site should be free of hazardous brush, limbs, roots, stumps, and poisonous plants.

c. Only rope bridge sites approved by the RCO will be used, and they should be verified with an arborist or engineer to ensure that the anchors will be capable of supporting the bridge and cables and the suspension of human life.

d. Trees must be alive and capable of safely holding the weight of the course and participants.

e. If trees are not used, the anchor will be inspected to ensure the capability of safely holding the weight of the course and participants.

f. If platforms are erected in trees, they must be secure and in good repair.

g. Hessian, to protect the structure or trees from wear due to friction and contact with both the safety cable and ropes will be in good condition.

h. Appropriate boundaries and signage areas will be determined.

57. Inspection prior to use should be conducted by a qualified instructor in rope bridging for the integrity of all hardware, materials, equipment, and condition of the environment in the vicinity. You will find the list at Annex G.

58. The following must be completed **before** construction and operation take place:

a. The appropriate authority approved both the site and instructor.

b. The appropriate authority has been granted.

c. A certificate of approval has been obtained and recognized by the appropriate authority from an arborist or engineer that deems the site safe for a ropes course.

d. An environmental assessment has been completed.

59. A communications plan has been established to contact including, but not limited to:

a. military police or local authorities;

b. hospitals – emergency service;

c. ambulance;

d. air emergency;

e. search and rescue;

f. participants' emergency contact numbers;

g. first aid attendant; and

h. safety/emergency vehicle driver.

INSTRUCTOR TO CADET RATIOS

60. Most reputable ropes challenge course vendors provide the appropriate ratios of qualified instructors to participants. However, the following are minimum ratios:

a. low ropes course: one instructor for every 15 cadets; and

b. high ropes course: one instructor for every six cadets.

COURSES SAFETY PRECAUTIONS

61. The maximum participants in obstacle courses is one cadet per activity with at least one person "spotting" at each activity. An instructor must supervise all activities taking place. Due to possibility of activities taking different times to complete and the physical and mental levels of participants not being equal, the course should be operated ensuring that cadets will not be in a position to catch up to or pass other participants.

62. The maximum participants in a rope bridging activity should be one cadet per bridge. An instructor should run a site having less than one cadet per bridge if they feel safety may be an issue.

63. While the maximum participant is one per bridge, there may be times that an instructor or assistant may need to assist or rescue a participant. Instructors and assistants will be permitted to assist and rescue so long as it is conducted in a safe manner.

64. One instructor should be able to supervise a rope bridge site by himself as long as they can see all participants and maintain communication with all participants. Additional instructors are recommended for the rapid and appropriate response to emergencies can take place.

65. If there are additional factors, such as complex bridges or increased difficulties, CIC, Regular and Reserve Force CF members and senior cadets could be employed as an additional resource. Their duties may involve assisting participants with their harness or physically moving the participants' safety tether from one safety cable to another.

66. Although there is the potential for danger when conducting this type of training, preventative measures can be taken to minimize the potential for accidents. In order to ensure the effectiveness of training as well as the safety of those on the site, careful consideration must be taken with regards to safety. There must be proper pre-instruction for staff at a rope bridging site and the following items be inspected prior to every use:

a. anchors will be inspected;

b. knots will be inspected;

c. bridges and safety cables will be tightened;

d. site safety equipment will be inspected;

e. the instructor will be present at the site for the duration of all activities;

f. carabineers will be individually inspected for rust or other defects;

g. ropes will be inspected for damage;

h. helmets will be checked for cracks or other defects;

i. harnesses will be inspected including belts and buckles for fraying or other defects;

j. safety tethers will be tied and inspected; and

k. Swiss seats and chest harness are cut to length.

ENVIRONMENTAL CONSIDERATIONS

67. Ropes challenge course vendors will have policies and practices that address the impact on the physical environment as related to the safety of the participants (i.e. appropriate tree care, proper ground cover, structural pruning, dead limbing, etc.).

68. A concern for the environment must be foremost in all activities. The use of poles or man-made structures can eliminate some environmental concerns. If trees are used as anchors, they must be wrapped in Hessian to avoid friction on the tree's bark.

69. An environmental study by an arborist should be conducted to ensure strength and reliability and to ensure minimal damage will be done to the trees. Hessian must be taken down at the end of usage, allow the tree to mend itself during the non-usage period.

TIME OF DAY/YEAR REGULATIONS

70. Ropes and challenge course activity could conceivably be partaken at any time of day and at any time of the year. Safety could be a concern at night if the instructor was unable to properly observe all activities at the challenge course.

DURATION OF THE ACTIVITY

71. The physical and mental capacities of the participants would be the determining factor for duration. Time permitting, if a smaller number of bridges are used, participants should be given a chance to run through the course additional times. This will ensure maximum participation, as an instructor will not have to worry about having cadets unable to complete the course.

WEATHER CONSIDERATIONS

72. Ropes and challenge course activities are designed to offer each participant an opportunity to test mental and physical limits against perceived risks in a safe atmosphere. Consequently, different times of year and seasons can provide completely different tests, contributing new stresses and considerations to a participant's limits.

73. This is a very site-specific factor. Obstacle courses may be used at any time of year providing the instructor has taken all precautions with regards to safety.

74. An easy bridge could be crossed in rain or snow. Cables and rope will still support human life in either weather condition. Ropes do get slippery when they are exposed to precipitation. Rain can also play an important part in maintaining of equipment used at the site. Carabineers would have to be dried and oiled if exposed to rain. With snow, cadets may become cold, and a safety issue could arise on their ability to open and close carabineers. Another safety issue arises as cadets may have difficulty manoeuvring with bulky clothes.

75. Another safety issue arises with lightning. Rope bridges should not be constructed or operated if there is a chance of lightning.

ABSOLUTE STOP CONDITIONS

76. Each ropes and challenge course instructor and/or vendor must possess the ability to continually assess changes in the environment, which may directly affect participant safety as well as the appropriate policies to govern and outline such judgments. However, the following conditions must result in a complete cease of all rope and challenge course activities, and the appropriate actions taken as necessary:

a. weather conditions which compromise the safety of participants (i.e. rain, lightning, extreme hot, extreme cold);

b. any accidents or incidents where safety was compromised and the result was a reportable injury;

c. any medical emergencies (related or unrelated to the rope challenge course activities); and

d. the observance of any conduct/behaviour on the part of the rope challenge course staff/guides or participants which the OPI believes to compromise the safety of that individual and/or any other participant.

RISK ASSESSMENT AND MANAGEMENT

77. In an effort to reduce the potential for risks, the instructor must:

a. have knowledge of site specific policies and procedures;

b. have the ability to implement the emergency/evacuation plan;

c. have the knowledge to appropriately medically screen participants;

d. inform participants as to the nature of the activity they will undertake;

e. have the ability to manage participant behaviour to minimize risks;

f. be knowledgeable of site specific rescue procedures; and

g. ensure that rescues can be accomplished in a timely manner.

LOGBOOK

78. Participants of bridge and or ropes and challenge course activities are encouraged to keep a logbook of their experiences.

DEBRIEF

79. Participants should be debriefed after the activity. Often, participants will feel a certain amount of accomplishment or they may require more input. Participants may benefit from a one on one debrief identifying the quality of their performance.

ANNEX A

ROPES AND CHALLENGE COURSE ACTIVITY

OBSTACLE COURSES

1. Obstacle courses are an easy way to allow for participants to challenge themselves both physically and mentally. The appeal for obstacle courses is that they can generally be constructed in a minimal amount of time using whatever resources are available. As they are not usually too intensive, they can be constructed and operated by most CIC personnel, as long as each activity is “spotted” by at least one assistant, and the overall course is supervised by an adult.

2. Existing military obstacle courses should only be operated by qualified personnel and site-specific standard operating procedures must be adhered to.

3. Participants can complete obstacle courses either individually or as a member of a team and are usually timed accordingly.

4. Materials, the size of the area, and the participants’ physical and mental level are the usual factors in determining what activities could be included in an obstacle course. Although not limited to, some examples of activities that could be included in obstacle courses are:

a. **Football Tire Run-through.** Tires (10 to 16 should be adequate) are lined up side by side in pairs. Participants must run while stepping in each tire. The assistants will run beside the participant to assist them in the event of a fall.

b. **Camouflage Net Run-under.** Stakes can be placed around a sand pit with the camouflage net attached to the top of the stakes. The stakes must be padded in the event of a participant coming into contact with them. Assistants will run beside the participants to ensure that they do not hit the stakes and make it straight through to the other side of the sand pit.

c. **Sand Bag Pull.** A sand bag is filled with sand so that it can be dragged around by the participant around two stakes. One stake will be placed at the start point and the other stake a distance of around 15 feet, depending on the physical ability of the participants and the weight of the sand bag. The assistant will ensure that the participant performs this activity safely and be ready to replace a stake if it comes out of the ground.

d. **“Jumar” Pull.** Jumars are a device that allows one-way movement over a rope. When there is an attempt to move it in the other direction, the jumar will not move. Two tables can be placed on the ground end to end and covered with a tarp, to allow ease of movement over the tables. Stakes (four) are placed at four ends and 10.5 mm minimum kernmantle rope is attached and tightened between the stakes. The jumars are placed on the rope at the starting point. Participants will lie down on their backs at the start point, and push the jumars up the length of the rope. When their arms are completely outstretched, the participant pulls, and as the jumars will not come back down the length of the rope, the participant will be pulled along the table. This action is completed until they reach the end of the jumar pull. Assistants will ensure that the participant does not come into contact with the stakes, and will also move the jumars from the end point back to the start point for the next participant.

e. **Tires on Table Run-over.** Two tables are lashed together to form an “A-frame”. Tires are then lashed to the tables for ease of traversing this activity. Participants will be expected to run up one side of the tables and down the other. Assistants will ensure that the participant is safe while moving over and ensure that participants do not jump off the top.

f. **Rope Ladder Walk-over.** A rope ladder can be constructed and should also have handrails built so that participants can hold onto while participating in this activity. Participants will move over the ladder placing a foot on each of the boards. Assistants will walk beside the participants to help them in the event of a fall.

g. **Low Rope Bridge Postman's Walk.** A low rope bridge postman's walk can be constructed 1.5 to 2 feet off the ground. Assistants will walk beside the participants to assist in the event of the participant falling off the bridge.

h. **Sand Bag Toss.** A sand bag(s) (depending on participants level of fitness, a lighter and heavier bag may be good options), is tossed by the participant over a fixed object, such as chin-up bars. Assistants will ensure that the participant does not injure themselves with the sand bags, and will retrieve the sand bags for the participants.

i. **"Tyrolene Trolley" Traverse.** Although this activity can be run by an adult with no qualification, the set-up can be more difficult. A "Tyrolene Trolley" traverses is a trolley suspended in the air on top of two safety cables from anchor to anchor. It should be constructed no more than 8 feet (VACSTC), so that in the event of a fall, the distance the participant may fall would not be more than 1-2 feet. The participant will ascend a short ladder and hold onto the trolley. They will then softly jump off of the ladder and make their way across the traverse. Assistants will ensure that participants conduct this activity safely, assist in the event of a fall, and bring the trolley back to the start point for the next participant.

GROUP LEADERSHIP ACTIVITIES

5. The aim of group leadership activities is to provide the participants in a section with an opportunity to learn how to work more effectively and efficiently together. This would include brainstorming ideas for accomplishing tasks and then implementing them. It should be stressed that completing these activities is not necessarily the most important aspect and that even attempting the activities allows the section the opportunity to grow together.

6. Group leadership activities will only be conducted when supervised by an instructor.

7. Some examples for group leadership activities are, but are not limited to:

a. **Bungie Back Competition.** The following is the minimum equipment needed to run this event:

(1) harnesses;

(2) helmets;

(3) carabiners; and

(4) bungie cord.

A method of marking (i.e. mine tape) the boundaries and the line the participant must cross to win.

The participants will be first checked to ensure that their helmet and harnesses are on properly. They will then be hooked into the bungie cord. On the "start" command, the participants run in the opposite direction until they are told to stop. They will be told to stop if either participant is able to cross the line, someone falls uncontrollably, or they have stopped moving forward. The winner will then proceed to the waiting area to continue on in the competition as this is usually run in a round robin format.

b. **The Spider Web.** The aim of this activity is to get each member of the section through the spider web. No equipment is required for this activity, but the spider web must be constructed before the participants arrive.

Each opening in the spider web can only be used once and only those holes surrounded on all sides by ropes may be used. If any participant touches any rope, the activity ends and if time permits, the section should be allowed another opportunity to try again.

Figure 11A-1 The Spider Web Activity

c. **The Wall.** The aim of this activity is to get each member of the section over the wall. This activity requires supervision by at least two instructors, one at the top of the wall and one at the bottom, to ensure the safety of all participants. All staff and participants must wear helmets.

This event is timed from the “start” command until the last foot of the last participant touches the platform at the top of the wall. Participants should be given the opportunity to formulate a plan before proceeding with the activity and if time permits, multiple attempts should be given.

Figure 11A-2 The Wall Activity

GENERAL BRIDGE CONSTRUCTION GUIDELINES

8. The running end for ropes will be wrapped a minimum of three times around the anchor and secured onto itself using an overhand know and two half hitches. The wraps will be neat with no space between them.

9. The safety cable will be wrapped around the anchor a minimum of three times. The wraps will be neat with no space between them. The cable will be fastened onto itself using three “crosby clamps” making sure that they alternate up and down.

10. Rope locks should be fastened to the end that will be tightened. Using a minimum of 10.5 mm kernmantle rope, a girth hitch is tied around the anchor with the running end attaching to the rope bridge using a “running prussik.” The ends are then tied off using a “double fisherman’s knot.”

11. Safety cables should be tightened before rope bridges as this places the most stress on anchors and the rope bridge will become loose.

CHEST HARNESSES

12. The use of chest harnesses is recommended for high ropes courses. A chest harness may be a component of an UIAA/CE approved harness, an approved UIAA/CE chest harness, or constructed using 1-in. tubular sling. It is up to the discretion of the instructor to make the determination of whether a chest harness must be worn but as a guideline, participants with a small frame and participants with a large frame should wear chest harnesses. Another factor in determining if a chest harness should be worn is whether the participant can wear their seat harness over their hips.

SAFETY TETHERS

13. Participants must be attached to a safety cable or safety rope at all times. This is done through the use of tethers. A tether is a length of rope that has three “double figure of eight knots” tied in it. The knots are tied in the middle and at the two ends. The knot in the middle is attached to the harness using a carabiner. The other ends will have a carabiner attached to them for “locking” onto the safety cable. Their length should be one that is as short as possible, while still allowing the participant to move freely through the course. If tethers are too long, additional stress is placed on the anchors and safety cable in the event of a fall. Usually a 4-ft length is sufficient for use as a safety tether.

14. Additionally, “personal fall arrest systems shall limit the maximum arresting force on the person to 900 lb when used with a seat harness and limit the free fall distance to no more than six feet.” (ACCT)

SAFETY CABLES

15. Safety cables must accompany all rope bridges that are more than 2 ft off the ground. Less than 2 ft, spotters must move alongside the participants to assist them in the event of a fall.

16. Safety cables must be used on bridges over 2 ft. Low rope bridges (>=1.5 m) may use 10.5 mm kernmantle rope. High rope bridges must use steel cables.

17. Cables must also be checked for signs of overloading, a reduction in the cables diameter, corrosion, kinks, protruding core, broken wires, and lightning strikes. Cables will be retired if there are signs of cracks, splits, pitting, rusting, and broken wires. (ACCT)

18. Thimbles may be used when attaching cable to an anchor so that the safety cable will be smooth and have no kinks or contact with the anchor.

ANCHORS

19. Anchors must be approved before construction can take place.

20. Trees will be visually inspected from the ground and at the point that contact will be made with ropes and cables.

21. Poles will be visually inspected from the ground and at the point that contact will be made with ropes and cables. The pole must be sound, be of sufficient diameter, and driven to sufficient depth. (ACCT)

22. Buildings must be inspected both at ground level and at height, and a review of the structural plans must take place by qualified personnel. (ACCT)

23. The Association for Challenge Course Technology recommends that the strength of anchors should be a minimum of 2500 lb.

BOLT CONNECTORS

24. The tightness of nuts must be verified prior to each use to ensure that there can be no movement of the bolt. Bolt connectors must be checked to ensure that there are no bends, distortion, severe nicks, gouges, cracks, excessive wear or abrasion, pitting due to corrosion, and also that they are of proper size. (ACCT)

25. The placement of bolt connectors onto the safety cables can be seen in Figure 11A-3:

Figure 11A-3 Placement of Bolt Connectors Onto Safety Cables

“BURMA BRIDGE”

26. A “burma bridge” consists of two handrails and a walkway, which are connected by rope spreaders. The cadet simply walks along the walkway while holding only the handrails for support. The spreaders are in place to prevent the handrails and walkway from spreading apart when weight is applied.

“LOOP BRIDGE”

27. A “loop bridge” is similar to a “burma bridge” with the exception that the walkway has been removed. Cadets are required to walk along the bridge by stepping onto the loops, while holding the handrails for support. Cadets are forced to look down while crossing this bridge.

28. The “burma bridge” is on the left, and the “loop bridge” is in the centre of Figure 11A-4. Note that there is appropriate signage and boundaries have been put in place.

Figure 11A-4 “Burma Bridge” and “Loop Bridge”

“POSTMAN’S WALK”

29. A “postman’s walk” consists of a walkway placed level between anchors and a handrail placed approximately 5 ft above the walkway. If the ropes are placed too far apart, shorter participants will not be able to complete this part of the course. To cross this bridge, the participant must turn sideways, placing both feet on the walkway, and grasp the handrail with both hands extended over their head. To cross, one simply slides hand and feet simultaneously over the ropes.

30. An example of the “postman’s walk” can be found in Figure 11A-5.

Figure 11A-5 “Postman’s Walk”

“COMMANDO CRAWL”

31. A “commando crawl” consists of one single rope spanning two anchors. The participant must lie down on the rope with one leg hooked up behind and one leg dangling freely. The participants **must then pull themselves across the rope while pushing with the hooked leg as needed**.

“ZIP LINE”

32. A “zip line” is not a bridge, but a means for the cadet to get from their position in the air to the ground. One example/design of a zip line consists of three ropes attached close together at the top anchor and lead to three separate anchors on the ground. Anchors are spaced apart from each other causing the ropes to form a triangle. The three ropes run through the centre of a “rappel ring” (or other similarly safe and sufficient object), causing the ropes to be pulled together as the participant descends. This slows the participant down and stops them at the bottom. Due to the fact that there is no safety cable and the rope has a tendency to stretch, careful inspection by the instructor must be conducted daily, prior to use. This line can be quite intimidating for some cadets so the use of an assistant instructor in the aiding of attaching and coaching participants through this activity can take place.

33. An overhead view of a “zip line” can be found in Figure 11A-6, noting that the three anchors are the white slabs in the middle of the picture.

Figure 11A-6 “Zip Line”

ACTIVITY LEVEL-INTENSITY

34. The progression matrix found at Annex E can be used.

ANNEX B

EQUIPMENT STANDARDS

1. The following minimum equipment standards are required:

a. **Helmets**

(1) Optimum – any manufacturer – UIAA/CE approved.

(2) Minimum – CF helmet liner.

b. **Ropes for Bridge Construction**

(1) Optimum – manila 25 mm (NNO 4042-21-878-4645) for main parts of bridge.

(2) Manila 12 mm (NNO 4020-21-882-6325) for spreaders (non-life supporting lines that assist with the stability of bridges).

(3) Minimum – kernmantle 10.5 mm minimum, UIAA/CE approved.

c. **Ropes for Safety Tethers**

(1) Optimum – kernmantle 10.5 mm minimum, UIAA/CE approved.

(2) Minimum – nylon 12 mm.

d. **Carabiners.** Screwgate locking – any manufacturer – minimum breaking strength 4000 lb aluminum or 4000 lb steel.

e. **Gloves.** Leather.

f. **Safety Tethers**

(1) Optimum – kernmantle 10.5 mm minimum, UIAA/CE approved.

(2) Minimum – nylon 12 mm 3 strand.

(3) Cable, optimum – 5/8-in. flexible galvanized aircraft cable or stainless steel wire rope.

(4) Minimum – 3/8-in. flexible galvanized aircraft cable or stainless steel wire rope (ACCT).

(5) Minimum strength 11 500 lb (ACCT).

(6) Wire rope clips-constructed from forged, galvanized steel or equivalent corrosion resistant U-bolt clips (ACCT).

g. **Boots.** Minimum – Boots must provide ankle support (CF combat boots).

h. **Harnesses**

(1) Optimum-seat harness – any manufacturer – UIAA/CE approved w/chest harness as required.

(2) Minimum – improvised “Swiss seat” (can be found in B-GL-318-002/PT-001, p. 2-7 to 2-12) w/improvised chest harness (made with 1-in. tubular slings as required).

i. **Clothing.** Clothing should cover all areas of the body including legs and arms. Combat clothing with the sleeves down will accomplish this. Participants should also remove objects from their bodies that could impede their crossing of bridges or that could lead to injury. Under no circumstances should a participant be allowed to carry an item that would have the capability of cutting their harness, the ropes course, or their safety tethers (ACCT).

j. **Hessian.** To protect structure or trees from wear due to friction and contact.

k. **Pulleys.** Minimum breaking strength of 22.22 kN (5000 lb) (ACCT).

ANNEX C

SAFETY EQUIPMENT

1. The following safety equipment is required at each site:

   a. **First Aid Kit.** Suitable for number of personnel on the site.

   b. **Stretcher:**

      (1) Optimum – litter, stokes:

         (a) NSN 6530-21-809-9755 w/spinal board; or

         (b) NSN 6530-21-868-5609.

      (2) Minimum – litter folding:

         (a) NSN 6530-21-108-1610 w/spinal board; or

         (b) NSN 6530-21-868-5609.

   c. **Communications Equipment.** Radiotelephone or cellular phone.

   d. **Safety Vehicle**

      (1) Ready to and capable of carrying a stretcher.

      (2) Safety vehicle driver, St. John's Ambulance first aid qualified with CPR.

   e. **Ladder.** Must be sound and suitable for the intended use (ACCT).

ANNEX D

SAFETY CHECKLIST

1. The following checklist should be observed on all rope bridging training, but is not limited to:

   a. Participants must be attached to a safety cable or safety rope at all times. This is done through the use of tethers. A tether is a length of rope that has three “double figure of eight knots” tied in it. The knots are tied in the middle and at the two ends. The knot in the middle is attached to the harness.

   b. Helmets shall be properly secured and worn at all time except in a designated “helmets off area”.

   c. Participants must be under direct supervision of a qualified instructor although assistant instructors may assist.

   d. Participants have been briefed as to the activity they will be undertaking and are wearing proper clothing and gloves.

   e. Rope bridges have been inspected and are in good repair.

   f. People not participating in the activity are kept clear of the area in a designated area.

   g. No more than one participant is on any one bridge.

2. Only approved sites are used. Arborists and/or engineers may have to be consulted for approval of a site.

ANNEX E

ROPES AND CHALLENGE COURSE PROGRESSION MATRIX

Age	Star Level	Intensity of the Activity	Delivery Method	Safety Skills	Army Cadet Physical Fitness Level	Group Size	Instructor to Cadet Ratio	Training Provider	Technical Instruction/ Leadership	Authority
12-18	Green to NSCE	Famil	Day Instruction	1 to 4	None	None	1:10	LHQ	CIC/Military Contract With Trade	Det
13-18	Red to NSCE	Famil/Basic	Day Instruction	1 to 4	None	None	1:10	LHQ	CIC/Military Contract With Trade	Det
14-16	Silver to NSCE	Famil/Basic	Day Instruction	1 to 4	None	None	1:10	LHQ/Zone	CIC/Military Contract With Trade	Det/Region
15-18	Silver to NSCE	Intermediate	Day Instruction	1 to 4	Bronze	Max 20	1:10	LHQ/Zone	CIC/Military Contract With Trade	Det/Region
16-18	Gold to NSCE	Advanced	Day Trip	1 to 6	Silver	Max 15	1:10	Zone/Region	CIC/Military Contract With Trade	Det/Region/ National
17-18	Gold to NSCE	Advanced	Day Trip	1 to 6	Silver	Max 10	1:10	Zone/Region	CIC/Military Contract With Trade	Det/Region/ National

Figure 11E-1 (Sheet 1 of 2) Ropes and Challenge Course Progression Matrix

Familiarization Includes: Low Ropes Course

1 Putting on harnesses
2 Transferring from bridge to bridge
3 Use of safety tethers
4 Safety issues pertaining to course

Basic Includes: Low Ropes Course

1 Crossing of burma bridge
2 Crossing of loop bridge
3 Bridges that are not complex

Intermediate Includes: High Ropes Course

1 Crossing of a postman's walk
2 Crossing of a commando crawl
3 Use of a zip line
4 Construction of a postman's walk
5 Construction of a commando crawl
6 Addition of other activities including canoeing, orienteering, and abseiling, as part of a day trip
7 Coaching of participants
8 Assisting in operation of course

Advanced Includes: High Ropes Course

1 Construction of a zip line
2 Construction of a loop bridge
3 Construction of a burma bridge
4 Addition of other activities including canoeing, orienteering, and abseiling, as part of a day trip
5 Coaching of participants
6 Assisting in operation of course

Safety Skills

1 Displays good response/behaviour to direction
2 Uses and wears safety equipment properly
3 Follows rules of ropes course
4 Does not show signs of fear towards course
5 Knowledge of knots
6 Ability to work while at height

Figure 11E-1 (Sheet 2 of 2) Ropes and Challenge Course Progression Matrix

ANNEX F

EMERGENCY/EVACUATION PLAN

DUTIES AND RESPONSIBILITIES OF DESIGNATED PERSONS DURING AN EVACUATION

1. The designated first aid attendant will:
   a. suspend training;
   b. ensure all personnel are in a safe zone;
   c. tend to the casualty;
   d. assess situation and contact OIC;
   e. arrange evacuation;
   f. monitor the casualty; and
   g. travel with patient if needed.
2. The designated driver will:
   a. take instructions from first aid attendant and control person;
   b. prepare safety/evacuation vehicle for casualty and attendant;
   c. start vehicle and ensure its readiness to move;
   d. move vehicle as close to the vicinity as safely possible;
   e. depart area on command from first aid attendant;
   f. know route to hospital; and
   g. maintain communication with control person during transport.
3. The designated control person will:
   a. assume control of remaining personnel;
   b. maintain communication with first aid attendant;
   c. record information regarding information and if possible, photograph the site;
   d. assist with the evacuation; and
   e. assist with the vehicle and preparation.

ANNEX G

INSPECTION OF A ROPES BRIDGE SITE (ACCT)

1. Inspection prior to use should be conducted by a qualified instructor in rope bridging for the integrity of all hardware, materials, equipment, and condition of the environment in the vicinity. The following items for documentation are recommended but not limited to, and will be included in the legal logbook of the instructor:

a. date the inspection was performed;

b. who inspected and their qualifications and experience;

c. history of the site;

d. list of all elements inspected;

e. condition of each element inspected;

f. repairs or modifications made; and

g. recommendations for future repairs or modifications.

ANNEX H

REFERENCES

Challenge Course Standards. 5th ed. ACCT, Martin Michigan, 2002.

CHAPTER 12

INITIATIVE GAMES AND PROBLEM-SOLVING

DESCRIPTION OF ACTIVITY

1. The following chapter does not describe an adventure activity. Initiative games and problem-solving activities are used during adventure activities as concurrent or parallel activities. This chapter presents some problem-solving and initiative game suggestions which can be modified or adapted for use.

2. Initiative games are a great tool to use when building teams and getting to know people in a group. With more experienced groups or people who are already familiar with each other. These games are excellent resources that can be applied to any level of group and many of the games can be used for several different age groups. Look for progressions and individual instructions for each game. The majority of the games are also very portable and require very little equipment. These games are also good for building leadership within a group setting. Trust is something that requires a lot of effort to build and can be broken in an instant if it is not respected. Within a group trust is essential for maximum efficiency of the group and for the most enjoyable experience for all participants. To build trust within a group these games require that participants work with each other to solve problems. The use of super ordinate goals is one of the few ways that consistently produces cooperation within a group setting. These games are intended to produce situations with super ordinate goals. Super ordinate goals are those goals that require all participants in a group to cooperate in order for the objective to be reached successfully.

3. This chapter has broken activities up into three broad basic categories. These categories are introductory games (Annex A), active games (Annex B), and non-active games (Annex C). Introductory games are intended to introduce people to new members in a group. Active games are games that will require physical effort to accomplish the goals. Active games are a great way to get cadets up, moving around and having a little fun. Non-active games require analysis of a situation and thought to solve the problems presented. Non-active games can be used in more confined settings when staff would like to see cadets working with each other and being productive. The non-active games are also more commonly called problem-solving activities.

AIM OF ACTIVITY

4. The aim of initiative games within the CCM is to develop teamwork. Initiative games should be used in coordination with other activities in the CCM. Initiative games can be incorporated into training between activities, after hours or as a relaxing activity during free time. Initiative games are not intended to be a dominant daily activity, but should rather be used to supplement other CCM training. Introductory games should be used to introduce cadets to initiative games. Active and non-active games are intended for use with groups of cadets who are familiar with each other already. These games also increase trust and cooperation within a group setting. Initiative games are a fun way to get to know people within a group and to encourage teamwork.

CANADIAN REGULATIONS CONCERNING SPECIFIC ACTIVITIES

5. There are no current Canadian regulations surrounding the use of initiative games. Common sense, ethical, reflexive and safety considerations in all situations should apply to these activities.

MILITARY REGULATIONS

6. There are no current military regulations surrounding the use of initiative games. In these situations the regulations surrounding supervising cadets during training should be used to govern staffing requirements. For each game there are optimal numbers of participants. Some of these optimal numbers are less than the number of cadets who can be supervised at one time by an officer. The use of senior cadets as group supervisors is suggested in these situations.

CCM SAFETY REGULATIONS

7. There are no current safety regulations surrounding the use of initiative games within the CCM. In circumstances where initiative games are being used safety guidelines outlined for training will be used to govern initiative games.

AUTHORITY LEVEL

8. All staff members at the local, regional and national levels can use these games. All games require that participants have an open mind and willingness to participate. There is no concern with using any of these games with all age groups of cadets. These games are also useful within officer training settings and with civilian groups.

GOVERNING BODIES

9. Within the area of initiative games there are no current governing bodies. However there are many excellent resources available in local libraries and bookstores, there is also a small collection of games included with this chapter. This collection of games is intended to provide some basic information on games for officers and group leaders.

10. There are no costs associated with most activities. Some of the games may require minimal equipment. These needs can be fulfilled easily at the corps level.

11. For more information staff are encouraged to consult the reference list at the end of this chapter for related resources. Additional insurance and waivers should not be required for these games. Safety requirements and concern for safety within each activity are always to be considered by the group leader. These games are not intended to be high-risk activities. However, group leaders must at all times ensure that safety is considered.

12. Safety of the group rests solely with the group leader at all times. Cadet green cards and health cards should be on hand during all training in case of emergency.

EQUIPMENT REQUIREMENTS

13. There are no formal requirements for safety equipment when using initiative games. First aid supplies along with qualified first aid personnel should be employed in case of minor injury. In the case of major injury medical professionals should be consulted immediately.

14. All participants should be dressed in comfortable clothing for these games. For active games PT gear or combat clothing is recommended. In the case of problem-solving activities, any type of clothing is appropriate. Check the individual requirements for each game for additional equipment required.

TRANSPORTATION REQUIREMENTS

15. Transportation is not required for any of these activities.

CADET SKILL LEVEL AND PROGRESSION

16. Each game or activity has a recommended progression and all games can be used for all groups of cadets. Progression within activities will vary depending upon the skill level of the group. Begin at the lowest level, and only progress when the whole group is ready to move on. It is the responsibility of the group leader to ensure that progression is not done too quickly as safety concerns are increased when progression is done too quickly.

17. Cadets must successfully complete one progression level prior to moving on to the next level. Progressing too quickly will also defeat the purpose of the games as cadets will become frustrated and will not be successful if the task is too difficult. The intention of these games is to provide a challenge for all cadets but the challenge must be achievable for the games to work effectively to build trust within the group.

18. Progression for each activity is listed within the game description. There are three main groups of activities contained within this chapter, introductory, active and non-active games.

19. The same progression considerations should be used when working with adult groups.

PHYSICAL FITNESS

20. Physical fitness levels vary between activities. For the non-active games there is no minimum requirement for physical fitness. For all other games the fitness requirements and fitness of individual participants is the responsibility of the group leader.

21. The group leader must consider the physical demands of the activity and adjust the level of difficulty according to the group. Adaptation of these games, as with progression, is the responsibility of the group leader.

QUALIFICATIONS, EXPERIENCE AND FITNESS OF LEADERS AND OPI

22. There are no national qualifications surrounding SMEs in the field of initiative games.

23. After reading the short description all staff can be considered qualified to conduct initiative games. The games are not difficult to understand and require only limited preparation.

24. Optimal numbers of participants for each activity are suggested, however these are flexible.

25. Qualified first aid personnel should be on the grounds at all times when initiative games are being played. First aid kits must have sufficient supplies for the number of participants in the group.

26. Group leaders are to try some of these activities on their own time to become more familiar with the games before working with a large group.

REQUIRED PREPARATORY WORK

27. A level playing field or gymnasium is required for active games. For non-active and introductory games any safe gathering area is appropriate. Space requirements will also vary with individual games. Staff should keep space requirements and restrictions in mind when choosing a game.

INSTRUCTOR TO CADET RATIOS

28. Officers must adhere to CATO 13-12 for initiative games.

29. Optimal numbers of participants are suggested for each game. These suggestions are flexible and can be adapted to individual groups.

30. Considerations for safety should follow outlined safety ratios for training in the CCM.

MAX AND MIN NUMBER OF PARTICIPANTS

31. The number of participants is flexible and depends on the skill level and individual activity.

MANAGEMENT GUIDELINES

32. To reduce the number of people in the group senior cadets can be used to supervise small groups. Only senior cadets familiar with the games should be permitted to supervise small groups under the direction of the group leader.

33. The officer in charge maintains full responsibility for all cadets undergoing training. When larger groups have been divided leaders are reminded to consider span of control for supervision of all cadets.

TRAINING GUIDELINES

34. Introductory training is not required for these activities. However, all participants must to be present to hear rules and guidelines for each game. All participants should be familiar with the chain of command and authority within the CCM. Following the directions of the group leader at all times is an essential requirement for all participants.

NECESSARY PLANNING

35. All participants should be advised of the location of local first aid personnel. A briefing of evacuation and emergency plans for each building should be conducted to commencing the activities.

36. In the case of outdoor activities, emergency plans and RV locations should also be confirmed prior to commencing any activity. Emergency planning is dependant on the individual location of all activities. Emergency briefings must be conducted prior to all training.

TIME OF DAY/YEAR REGULATIONS

37. All non-active and introductory initiative games can be conducted at any time of the year.

38. Participation in these games should be limited to normal training hours.

39. When planning for active initiative games, local weather conditions should be considered and the leader should adjust location of activities accordingly. The leader is responsible for determining the fitness of the environment for training.

40. Extremely hot or cold conditions should be avoided for all active games.

DURATION AND INTENSITY LEVEL OF THE ACTIVITY

41. Activities should be conducted in not more than 50-minute continuous time blocks with 10 minutes of rest between activities. Some activities will not take the full amount of time.

42. The group leader must observe the group at all times. Depending on the intensity of the game, the leader of the group can give more rest as required. More rest will be required in hot conditions.

43. Considerations for hydration and rest are the responsibility of the group leader.

44. Progression for each activity is listed under the description of all activities. Paying close attention to the different levels of progression will maximize the effectiveness of the activities in building team cooperation and trust. Do not skip progression levels when adapting the activities. The successful completion of all progression levels will help to impress upon group members the feelings of pride when tasks as are completed.

ENVIRONMENTAL CONSIDERATIONS

45. **“Due diligence”** should govern the use of all training areas, as per TREES requirement. There are no additional requirements when initiative games are being conducted.

WEATHER CONSIDERATIONS

46. Location and clothing requirements are to be determined by, and are the responsibility of the group leader. Local weather forecasts should be consulted in advance of the planned training. Seasonally appropriate comfortable clothing is recommended.

ABSOLUTE STOP CONDITIONS

47. Games will be ceased immediately if at any point the group leader feels that the safety of the group has been compromised in any way.

48. Group leaders may choose to revert to a lower progression level and resume the activity or the activity can be terminated completely. If the activity is terminated completely, another activity can be chosen to resume training.

49. Safety is at all times the responsibility of the group leader.

RISK ASSESSMENT AND MANAGEMENT

50. Within this chapter there are some basic considerations for risk assessment guidelines. These guidelines are an outline but this is not an exhaustive list. The assessment of risk in individual situations is the responsibility of the group leader:

a. temperature;

b. equipment;

c. age, and experience of participants;

d. local weather conditions; and

e. skill level of the leader.

DEBRIEF

51. Both cadets and staff should be debriefed after the activity. Often, participants will feel a certain amount of accomplishment or they may require more input. Participants may benefit from a one on one debrief identifying the quality of their performance.

ANNEX A

INTRODUCTION LEVEL

BINGO

1. **Objectives.** Introduce group members to each other, learn about other group members, encourage initiative.

2. **Level.** Introductory.

3. **Supplies**

   a. Paper.

   b. Bingo sheets.

4. **Description.** All members of the group are given a Bingo sheet. Everybody in the group must mingle with other people in the group and ask questions to find out about other people. The idea is to fill in the Bingo sheet by having people sign in squares that apply to them. First person to get a complete line of squares filled calls out Bingo!!! The group leader will then have people gather up and will confirm the correct answers. Part of the idea is to have people listen while the leader reads out the correct answers to learn more about the people in the group.

5. **Diagram**

Has worked in QM	Has a first aid course	Passed Green star	Is in the Band	Was at the Christmas Dinner
Is a marksman	Has Gold fitness	Is taking Math in school	Has been the Drum Major	Was at the last Remembrance Day Parade
Has been a staff cadet	Has been to an advanced camp	***FREE***	Has taught a class	Has been on a canoe trip
Was on the last FTX	Has been to camp	Wants to be in the Regular forces	Has been abseiling	Has lived in another province
Has been to Ottawa	Has a birthday in the same month as me	Works at a part time job	Plays on a hockey team	Is on Drill Team

6. **Optimal Number of Participants.** Max 20.

7. **Progression.** None.

8. **Solution.** Fill in a line (straight or diagonal) and call out Bingo!!!

GREETING LINE

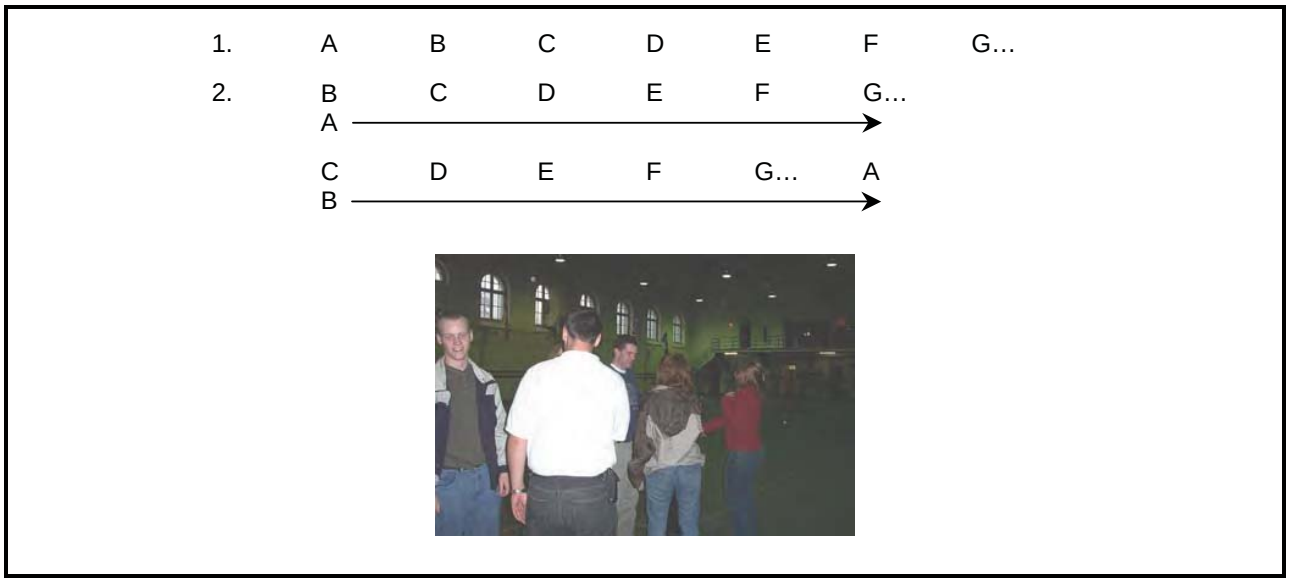
1. **Objectives.** Introduce new members of a group to each other.

2. **Level.** Introductory.

3. **Supplies.** None.

4. **Description.** All members of the group line up in a single file. The person on the end starts by going in front of the other people and greeting them. As each person begins the greeting process the person at the end of the line goes around to the front and passes down the greeting line. When that person reaches the end of the line they turn back around and greet the other people as the come by. Each person will greet all of the other people in the group.

5. **Diagram**



6. **Optimal Number of Participants.** Max 20.

7. **Progression.** None.

8. **Solution.** Greet all people in the group.

NAME GAME

1. **Objectives.** Learn people's names, public speaking, get to know people in a group.

2. **Level.** Introductory.

3. **Supplies.** None.

4. **Description.** The group forms a circle and one person begins by saying their name and a fruit that begins with the same letter as the first letter of their name. The second person repeats the first person's name and fruit, and then follows with their own name and fruit. This continues until the last person in the circle attempts to name all people in the circle and each person's fruit.

5. **Optimal Number of Participants.** More people will make the game more difficult, however too many people will result in disinterest.

6. **Progression.** None.

7. **Solution.** See how many people in the group can be remembered by a single person.

TOILET PAPER INTRODUCTION

1. **Objectives.** Introduce members of a team to each other, public speaking, learn about team members.

2. **Level.** Introductory.

3. **Supplies.** One roll toilet paper (divided into squares).

4. **Description.** Instruct each participant to take some toilet paper and pass the roll along. Do not give instructions as to how much toilet paper to take. When all people have some toilet paper tell people that for each square of toilet paper that they took they must reveal one interesting fact to the group about themselves.

5. **Diagram**

6. **Optimal Number of Participants.** At the discretion of the leader.

7. **Solution.** It is hoped that some participants will take larger amounts of toilet paper and will introduce themselves in detail to the group.

ANNEX B

ACTIVE LEVEL

BLINDFOLDED RELAY

1. **Objectives.** Teamwork, trust, communication skills, listening, organization.

2. **Level.** Active.

3. **Supplies**

   a. Blindfolds.

   b. Various objects.

4. **Description.** Break the group into two teams of five. One person on each team will act as the leader; all others are runners. Runners are blindfolded for this activity. The leaders of both teams are placed in a central location and are not allowed to move during the game. The leaders must use voice commands to get the runners to pick up all objects in the surrounding area and bring them back to the team leaders location. The team to bring back all objects first scores a point.

5. **Diagram**

6. **Optimal Number of Participants.** 10.

7. **Progression.** No progression.

8. **Solution.** Teams collect all objects from surrounding area. Be very careful during this game as the runners are blindfolded and cannot see where they are walking.

BODY SPELLING

1. **Objectives.** Teamwork, creative thinking, competition.

2. **Level.** Active.

3. **Objectives.** Teamwork, build non-verbal communication skills, team competition.

4. **Supplies**

   a. Index card.

   b. Marker.

5. **Description.** Divide group into two teams. Have one member from each team approach the group leader and view a word on an index card. Both people must use their body to try and spell out the word to their team. Talking by the speller is not permitted. First team to guess the word gets a point.

6. **Optimal Number of Participants.** At the discretion of the leader, smaller groups are more effective.

7. **Progression.** Move on to commonly known phrases.

8. **Solution.** The first team to successfully guess the word wins. Encourage participants to be creative.

BUM SPELLING

1. **Objectives.** Teamwork, competition, creative thinking.

2. **Level.** Active.

3. **Supplies**

   a. Index cards.

   b. Marker.

4. **Description.** Divide the group into two teams. Have one person from each team approach the leader. The group leader shows both people an index card with a word on it. Upon being given the command to begin the two people try to spell out that word with their bum to their team. First team to correctly identify the word is given a point.

5. **Diagram**

6. **Optimal Number of Participants.** At the discretion of the leader, smaller teams are preferable.

7. **Progression**

   a. Have one team try to spell and guess for one minute with the second team watching. If a guess is not successfully made give the other team a chance to steal the point with a correct guess. Alternate teams for spelling and stealing.

   b. Move on to spelling longer words or phrases.

8. **Solution.** Teams successfully guess the words being spelled out by their team members.

GUIDED TOUR

1. **Objectives.** Build trust between group members, experience environment without sight, communication.

2. **Level.** Active.

3. **Supplies.** Blindfolds.

4. **Description.** Pair up team members and blindfold on person. The blindfolded person must rely on the seeing person to lead them through a course. When the group has successfully navigated through the course, have partners switch blindfolds and try a new route.

5. **Diagram**

6. **Optimal Number of Participants.** Even number of participants, maximum 12 people. Ensure that safety is stressed while people are blindfolded.

7. **Progression.** Try having people guess where they are after a short walk.

8. **Solution.** All participants travel through the course successfully.

HUMAN PICTIONARY

1. **Objectives.** Teamwork, non-verbal communication, competition.

2. **Level.** Active.

3. **Supplies**

   a. Paper.

   b. Marker.

4. **Description.** People are divided into two teams. One volunteer from each team comes up to the group leader and looks at a common word written down on a piece of paper. Both people try to act out this word; first team to guess correctly wins a point. People acting out the words cannot speak to their team members.

5. **Optimal Number of Participants.** 10, five per team.

6. **Progression.** Move on to more difficult or obscure words. Have one person acting out the word while the other team watches. Give 30 seconds or a minute then allow the team that is watching to guess to steal a point.

7. **Solution.** The team members correctly guess word or phrase.

LOG ROLL

1. **Objectives.** Group problem-solving, teamwork, trust building.

2. **Level.** Active.

3. **Supplies.** None.

4. **Description.** All participants align themselves on the ground side by side, except for one. The single participant left over lies down perpendicular on the other participants. The parallel participants roll and in the same direction moving the perpendicular from one side of the line to the other.

5. **Diagram**

6. **Optimal Number of Participants.** 10 to 12 participants will produce optimal results, however this number is flexible.

7. **Progression.** Increase the number of perpendicular participants rolling at one time.

8. **Solution.** Perpendicular participant successfully rolls to the other side of the parallel line.

MILK RUN

1. **Objectives.** Teamwork, cooperation, group problem-solving.

2. **Level.** Active**.**

3. **Supplies.** Milk crate.

4. **Description.** All participants are gathered around a milk crate (which is upside-down). Participants are instructed to try to get as many people as possible on top of the milk crate and hold for three seconds. All people must be off the ground for a full three seconds.

5. **Diagram**

6. **Optimal Number of Participants.** Usually more than six is very difficult.

7. **Progression.** Try with one, two, three, etc. See how many people can get off the ground.

8. **Solution.** All people must be off the ground for three seconds.

PEOPLE PASS

1. **Objectives.** Teamwork, collective problem-solving, trust building.

2. **Level.** Active.

3. **Supplies.** None.

4. **Description.** All participants, except two, line up parallel to each other on the ground and stretch out their arms. The leader lowers the perpendicular participant down onto the out stretched arms of the parallel participants. All parallel participants work together to pass the perpendicular participant along the line to the other end. At the other end the leader helps to lower the perpendicular participant to the ground. All participants should be given the opportunity to try out the activity.

5. **Diagram**

6. **Optimal Number of Participants.** At least 10 people are required to make this activity successful.

7. **Progression**

   a. Begin with lighter people in the group and progress to the heavier people.

   b. As confidence is gained with the lighter participants the heavier people will be easier to transport.

8. **Solution.** All people successfully travel from one end of the line to the other.

SITTING CIRCLE

1. **Objectives.** Teamwork, trust, coordination, communication.

2. **Level.** Active.

3. **Supplies.** None.

4. **Description.** All people in the group make a circle. Have the circle turn to the right and close in towards the centre. When all people are as close to each other as possible, the group leader will give the direction for all people to sit down. People will sit on the knees of the person behind them.

5. **Diagram**

6. **Optimal Number of Participants.** Six to 12.

7. **Progression.** When the circle has been mastered have people try to take a step while sitting down.

8. **Solution.** Have the group balance for as long as possible and try to walk.

WHO AM I?

1. **Objectives.** Encourage teamwork, critical thinking, cooperation, problem-solving skills, listening.

2. **Level.** Active.

3. **Supplies**

   a. Index cards.

   b. Markers.

   c. Tape.

4. **Description.** All members of the group have an index card taped on their back by the group leader. Index cards have the names of common people on them. By only asking Yes/No questions all participants must figure out the name of the person on their back.

5. **Optimal Number of Participants.** 10 to 12 people, however this is flexible and remains at the discretion of the leader.

6. **Progression**

   a. Introduce places, activities, and other common items onto the index cards.

   b. Only allow participants to ask each other person one question.

7. **Solution.** Participants successfully guess what is written on the index card.

ANNEX C

NON-ACTIVE LEVEL

BROKEN TELEPHONE

1. **Objectives.** Improve listening skills, concentration, and teamwork.

2. **Level.** Non-active**.**

3. **Supplies.** None.

4. **Description.** The group leader has participants sit in a circle. One person starts by whispering a message to the person next to them. That person has to whisper the same message to the next person, and so on until the last person in the group receives the message. The last person will say the message out loud. The first person then tells the group what the original message was. The idea is that the message will change as it is passed around the circle.

5. **Diagram**

6. **Optimal Number of Participants.** Max 15.

7. **Progression.** None.

8. **Solution.** Try to have the same message at the end as you started with.

BUZZ

1. **Level.** Non-active.

2. **Supplies.** None.

3. **Description.** All participants sit in a circle. A count is started by the group leader and is continued around the circle. Each time the number with 7 in it is to be named, the person replaces that number with the word “BUZZ”. If a mistake is made that person is eliminated until a single winner is declared.

4. **Optimal Number of Participants.** At the discretion of the leader, not more than 12 or people may become disinterested.

5. **Progression**

   a. Try to increase speed of the count.

   b. Each time a number with 7 in it or a multiple of 7 is to be named “BUZZ” is used.

   c. When “BUZZ” is used the direction of the count also changes.

   d. Introduce a second word to replace another number, e.g. replace 4 with “SNAP” and repeat progression.

6. **Solution.** Continue the game until a winner is declared.

FOLLOWING DIRECTIONS

1. **Level.** Non-active.

2. **Supplies**

   a. Pen and paper.

   b. Pictures.

3. **Description.** Participants are put in pairs. One person is the communicator and the second is the listener. The communicator is given a picture and the listener is given pen and paper. The communicator gives verbal directions to the listener on how to reproduce the picture. The listener cannot ask any questions during the activity and the communicator cannot look at the picture during the activity. When the communicator feels that the picture should be complete both participants can view both pictures.

4. **Diagram**

5. **Optimal Number of Participants.** An even number of participants is necessary for this activity. The number of participants for this activity is at the discretion of the group leader.

6. **Progression**

   a. Allow listeners to ask questions of the communicator for clarification.

   b. Allow the communicator to receive questions and see the picture the listener is drawing, but not allow the listener to see the communicator's picture.

7. **Solution.** Most effective communication will produce pictures that most closely resemble the pictures of the communicator.

PSYC!

1. **Objectives.** Improve listening skills, encourage people to pay attention to detail.

2. **Level.** Non-active.

3. **Supplies**

   a. Pen and paper.

   b. List words.

4. **Description.** Instruct the group members to remember the words in the list that will be read out by the leader. The group leader reads out the following list or words. Prick, Thread, Pin, Injection, Yarn, Sharp, Sew, Repair, Silver, Point, Poke. Read the list only once fairly quickly to the group. Following reading of the list instruct participants to write down all words that they can remember.

5. **Optimal Number of Participants.** At the discretion of the leader.

6. **Progression.** Try using groups of about 10 to 12 words relating to adventure training. For example Canoeing, Biking, Hiking, Biathlon. Develop your own set of words.

7. **Solution.** It is hoped that participants will inadvertently write down the word Needle, which is not in the list or words. This activity is intended to teach people to listen very carefully to all instructions.

QUESTIONS

1. **Objectives.** Creative thinking, listening, communication.

2. **Level.** Non-active.

3. **Supplies.** None.

4. **Description.** Have all group members sit in a circle. Instruct people that they must not answer questions, but only respond with other questions. One person will begin by asking a question to a person. That person will then direct another question to a different person. The key is to try and trick people into answering the questions being asked of them. If a person answers a question they are eliminated until only a single person remains.

5. **Optimal Number of Participants.** Up to 12, at the discretion of the leader.

6. **Progression**

   a. Increase the speed of the questions.

   b. Have more than one person ask questions at a time. Resulting in several questions being asked at one time.

7. **Solution.** A single person remains as the game winner.

STORY TELLING

1. **Objectives.** Patience, communication, following directions, public speaking.

2. **Level.** Non-active.

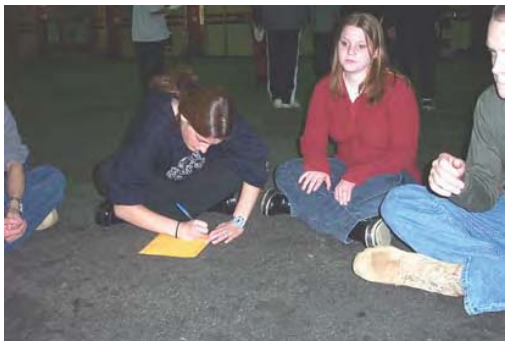
3. **Supplies**

   a. Paper.

   b. Pen.

4. **Description.** All group members sit in a circle and one person is given a paper and pen. The group leader explains that the group is creating a story. The first person writes out one line of the story and fold over the paper so that the next person cannot see the line. The next line is started with one word before the paper is passed along. The second person that receives the paper looks at the single exposed word and continues the thought or sentence. When they have written their line they fold the paper over so that the writing cannot be seen, they also leave one word exposed. This process continues until each person has had a chance to write a line of the story. When the last person finished their line they pass the paper on to the person who began the story. The person who began the story reads out story for the whole group to hear.

5. **Diagram**



6. **Optimal Number of Participants.** Maximum 15, with too many people the activity will take too long and people will lose interest.

7. **Solution.** The story is read aloud to the group.

TRIANGLES

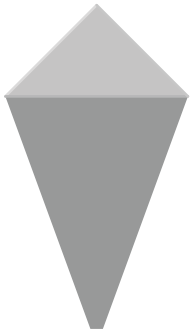
1. **Objectives.** Critical thinking, problem-solving.

2. **Level.** Non-active.

3. **Supplies.** Six sticks (all the same length).

4. **Description.** Give six sticks to the group and explain that they must form four equilateral (all sides the same length) triangles with the sticks.

5. **Diagram**



6. **Optimal Number of Participants.** Up to 20 but try to have as many sets of sticks as possible, only about 3 or 4 people can work on a set of sticks.

7. **Solution.** The solution is a 3-D object, a triangular prism. Most people will not think to use a 3-D object.

ANNEX D

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GLOSSARY

Adventure Centre

Adventure centre consolidates resources that are above the LHQ level to provide challenging adventure training opportunities that further develop skills while promoting personal growth.

Adventure Training

Adventure training is the vehicle to develop leadership skills, teamwork and personal growth through challenging adventure activities, with a perception of risk. It creates both physical and mental challenges that are designed to promote and maintain enthusiasm towards the Army Cadet program.

Army Cadet Challenge

An adventure race for Army Cadets that challenges their adventure, bush craft, fieldcraft and leadership and fitness.

CAATC

The Cadet Adventure and Athletic Training Club is an informal group within the LHQ that meets to participate in extra adventure and physical fitness training and activities.

Day Instruction

Usually occurring in or near an urban or rural centre; single site oriented; less than 30 minutes from support services.

Day Tripping

Usually close to a municipality, but involving some travel through a parkland area, private or public property; 30 minutes to three hours from support services.

"Due Diligence"

Actions expected of a reasonable person to manage risks.

Expedition

An expedition is any activity that consists of dynamic travel of **no less than 36 hours** in duration, where there is a clear goal associated with the activity. Expeditions include Army Cadet Adventure Training Activity (ACATA) components and inherently practice the application of star program skills.

Level of Activity – Advanced

a. Few new skills are introduced;

b. Success depends on participants drawing heavily from previous training and experiences and adapting to meet challenges of activity/training;

c. Duration and intensity are now at their highest level;

d. Participants may have varying degrees of success;

e. Risk, both perceived and real, is considered significant to all;

f. Support requirements normally exceed those that the LHQ or zone can provide;

g. Location is remote and outside assistance may not be immediately available; and

h. The nature of the terrain or water features poses numerous hazards that are not immediately apparent to participants.

GLOSSARY (Cont)

Level of Activity – Basic

a. New skills are introduced and previously learned skills are practiced and perfected;
b. Conducted as an activity/training session where participants are required to demonstrate competency in skills;
c. Duration (and intensity) of training has increased from the familiarization level;
d. Participants are introduced to new or different training locations;
e. Element of risk remains low; and
f. Support requirements to accomplish activity/training can usually be filled by the LHQ.

Level of Activity – Familiarization

a. New skills are introduced and practiced as a participatory activity;
b. Short duration;
c. Low perceived risk;
d. Participants and instructors easily forecast results of their actions;
e. The degree of support in terms of instructors, equipment and expenditure is low;
f. Activity/training location is easily accessible; and
g. Participants easily recognize any hazards.

Level of Activity – Intermediate

a. New technical skills are introduced and perfected;
b. Extended duration, increased intensity and more removed training location create the challenge for participants;
c. Perceived risk for the participants is greatly increased and risk management becomes a more important role for the leaders/instructors;
d. Results of the training are not easily forecast by participants; however all are still confident and feel in control of the situation;
e. Support requirements normally exceed those that the LHQ can provide; and
f. The RCSU or D Cdts would generally supply some or all specialized instructors/leaders/equipment and funding.

LHQ

Local Headquarters – the environment of a cadet when not at a Cadet Summer Training Centre; it includes the community and surrounding area as well as the resources available to the Corps within that area.

Liability

The state of being liable. The nature of the cadet movement means that CIC members may be considered liable to civil and military authorities. In some circumstances cadets may be considered liable for their actions/non-actions.

“Minimum-Impact”

This term describes a conscientious method of planning, preparing for, and conducting outdoor training so that it makes as little as possible or no impact on the natural environment; this includes the reduction of impact on wildlife and the enjoyment of the outdoor experience by other persons. **“No-Trace” camping** is a more strict application of minimum impact practices.

GLOSSARY (Cont)

Mountaineering (Ref: Mountaineering Techniques CF Publication)

Anchor Rope. A rope tied to an anchor to secure a belayer.

Balance Climbing. The basic technique of mountain movement generally requiring only the use of hands for balance. Mainly refers to rock climbing without the use of the climbing rope or other specialized aids.

Belaying. To secure or be secured with a rope against a possible fall by a climber.

Bight. A simple turn of rope which does not cross itself.

Chimney. A vertical fissure in rock large enough to accommodate the body of a climber.

Chute. A chute-like crack in rock or terrain caused by erosive action, generally wider than a chimney, vertical or sloping.

Commando Crawl. A method of crawling on top of a rope by laying on the chest with one leg and foot hooked over the rope and letting the other leg hang down pulling with the hands.

Crack. A fissure in rock or ice, varying in size, accommodating a piton, hand, foot or log.

Exposed Climb. A climb from which a fall would be severe or fatal.

Face of Rock. The sheer, unbroken front of a cliff or rock.

Fissure. A crack in rock or ice.

Fixed Rope. A rope or series of ropes installed and secured to aid climbers in overcoming difficult terrain.

Free Climbing. Climbing without a rope or other aids.

Gully. A shallow, narrow ravine caused by erosion.

Half Hitch. A loop, which runs around an anchor or anchor rope so as to lock itself.

Hold. A rock or man-made support ice or snow used by a climber in progressing from one position to another. Method of using such support.

Knot. A fastening made by intertwining or tying together pieces of rope.

Loop. Simple turn of a rope which crosses itself.

Mountaineering. The art of mountain climbing.

Piton. A metal wedge driven in rock or ice used to provide support.

Rappelling. The process whereby a climber lowers himself by sliding down a climbing rope.

Rock Fall. The fall of any quantity of rock on a mountain.

Rope. A strong cord made of intertwisted strands of fibres.

GLOSSARY (Cont)

Mountaineering (Cont)

Scree. Small unconsolidated rocks and gravel (or smaller) located mostly below rock ridges and cliffs.

Scree Slope. Slope covered with scree.

Slab. A relatively smooth portions of rock laying at an angle.

Sound Rock. Firm rock which holds together well. The opposite of rotten rock.

Standing Part. Anchored portion of rope.

Talus. Accumulation rock debris, fallen from dominant rock ridge or face, larger than scree or large blocks, unconsolidated in nature.

Talus Slope. Slope covered with talus.

Tension Climbing. Climbing with the aid of pitons, in which the belayer holds the climber on the rock and assists his progress with tension in the rope (pulley system).

Traversing. Ascending or descending diagonally instead of straight up and down.

Tyrolean Travers. A method used in mountaineering go around obstacles by the use of rope bridge and rappel seat, sometimes pulling with the hands.

Wall. A vertical or near vertical portion of mountain, rock or ice cliff.

Working End. Free end or the end of the rope, which is being worked.

Orienteering (Canadian Orienteering Federation)

Beginners. Individuals who are learning the basic skills.

Beginner or Wayfarers. Recreational.

Class A. Denoting the most advanced class.

Class B or Open. Denoting shorter and/or less technically demanding courses.

Class E. Reserved for special Elite classes.

Types of Orienteering Events

Cross-country Orienteering. Participants visit controls in a specified order. The winner is the participant who completes the course in the shortest elapsed time.

Score Orienteering. Participants score points by finding controls in any order within a specified time. The winner is the participant with the highest point total.

Either of the above types of event may be: night event, relay or team race.

GLOSSARY (Cont)

Orienteering (Cont)

Relay Race. Teams of individuals compete consecutively and are ranked against other teams.

Team Race. A specified number of individual times of team members are added together; ranking is according to these total times.

Wayfarers. Groups of two or more individuals who complete a course together helping one another.

Principal Officials of an Orienteering Meet

The **Meet Director** shall take responsibility for the meet. The Meet Director shall appoint such further officials as are necessary and see that they understand and fulfill their duties.

The **Course Planner** shall design the courses and be responsible for preparing the control markers, punches, competition maps, control description lists and for the correct placing of the control markers and punches prior to the event.

The primary tasks and responsibilities of the **Controller** shall be:

a. check the quality of the map and to recommend necessary revisions;

b. check the start and finish areas and all control locations for correct position and suitability;

c. check that the general standard of the course is in accordance with current rules and standards of course planning;

d. check that the course as planned is fair to all participants particularly with regard to the quality of map detail;

e. check that the terrain and course are safe for participants with respect to hazards and dangerous locations.

More extensive description of a controller's functions are given in the *"A" Meet Organizing Manual* and the *Controllers Handbook*.

Overnight Tripping

Usually occurring on public lands (e.g. National or provincial parks) which are some distance from nearest municipality; three hours to 12 hours from assistance. Usually has duration of one to five days (one to three nights).

Paddling (CRCA Manuals, American Canoe Association Instructors Manual, A-CR-CCP-030/PT-001, Watercraft Safety Orders)

Big Water or River. Refers to very big rivers or reasonable size rivers in flood conditions. Typically, river capacity is measured in cubic meters per second (m^3/s) or cubic feet per second (ft^3/s). A river is considered big when it has a greater capacity than 750 m^3/s or 25 000 ft^3/s.

Canoë. Light open boat propelled by paddle(s).

GLOSSARY (Cont)

Paddling (Cont)

Canoe Training. Training limited to single location from which the class usually moves no more than 30 minutes or 1000 metres from the put-in point.

Canoe Tripping. It is any canoe activity that moves more than 30 min or 1000 m from the put-in point.

Flat Water. Describes paddling conditions in calm, relatively flat water with no noticeable current.

Kayak. Light closed boat propelled by paddle(s).

Lake Water. Describes similar paddling conditions as flat water. Typically, lake water paddling refers to the highly advanced performance of flat water paddling manoeuvres to an aesthetic standard. Lake water is the progression of flat water manoeuvres to choreographed sequences, resulting in canoe ballet or canoe dance.

Moving Water. Refers to any water that has a discernible current typically assessed with the International Scale of River Difficulty (Class 1 to 6).

Ocean, Coastal and Open Water. Refers to paddling conditions in very large bodies of water that would behave like an ocean, e.g. seas, very large bays and very large lakes.

Reasonable Visibility. It is a paddling condition measured by the ability for each paddlers to see the entire group, the lead craft must also be able to see the equivalent distance ahead.

Voyageur Canoës. They vary in size and construction. They are usually much bigger than conventional Canadian canoes and measure at least 6 m in length. Some modern materials are used for performance but traditional materials like wood, bark and canvas are used in historical reproduction. Regardless of the construction, the voyageur canoe is built of a sturdy frame, robust shell.

White Water. It is sometimes used in reference to violent moving water. As a generic term, moving water encompasses white water.

Wilderness Paddling or Wilderness Trips. Describes paddling in a remote, wilderness settings with limited road/rail access, limited communications, difficult evacuation procedures and/or environmentally sensitive areas.

Risk Management

The management of risk factors surrounding an activity to reduce accident potential. The management is done thorough study of, and preparation for, areas of risk involved in training. It also includes constant monitoring of safe conduct of training and immediate response to changing situations. Each CIC officer who conducts adventure training assumes the element of risk involved in the activity and is responsible to manage it reasonably.

“Standard of Care”

The expected level of competency of an outdoor leader, and/or program, when compared to equivalent professional activities.

GLOSSARY (Cont)

Terrain Skills

The skill of safely moving a group across terrain. At the simplest level it would be crossing obstacles, and at the high end it would be mountaineering.

Transportation Skill

A method of non-motorized transport that holds a special and historical significance to a region/zone/LHQ where participation in this training/activity would also have cultural importance. An example could be dog sledding, or voyageur canoeing.

Wilderness Tripping

Often involving some travel, usually significant distance or significant challenge in remote wilderness regions, isolated from well-populated areas; more than 12 hours from support services. Usually has a longer duration than an overnight trip, three to 15 days (two to 14 nights).

Zone

“Zone” is a generic name to describe a division within a region where Army Cadet Corps are associated for purposes of support and/or training. Zones can host training and activities.

National Defence | Défense nationale

A-CR-CCP-030/PT-001

WATER SAFETY ORDERS

(BILINGUAL)

(Supersedes A-CR-CCP-030/PT-001 dated 2003-06-25)

ORDONNANCES DE SÉCURITÉ NAUTIQUE

(BILINGUE)

(Remplace la A-CR-CCP-030/PT-001 de 2003-06-25)

Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du Chef d'état-major de la Défense

OPI: D Cdts 4
BPR : D Cad 4

2005-01-01

Canada

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Personne responsable : D Cad 4-3

FOREWORD

1. A-CR-CCP-030/PT-001, Water Safety Orders, is issued on authority of the Vice-Chief of Defence Staff.

2. This publication supersedes A-CR-CCP-030/PT-001 dated 1988-04-18.

3. Suggestions for changes shall be forwarded through normal channels to National Defence Headquarters, Attention D Cdts.

AVANT-PROPOS

1. L'A-CR-CCP-030/PT-001, Ordonnances de sécurité nautique, est publiée avec l'autorisation du Vice-chef de la Défense nationale.

2. Cette publication remplace l'A-CR-CCP-030/PT-001 du 1988-04-18.

3. Toute proposition de modification doit être envoyée, par la voie réglementaire, au Quartier général de la Défense nationale, compétence du D Cad.

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CHAPTER 1

WATER SAFETY ORDERS

PURPOSE

1. The purpose of this order is to establish the minimum safety requirements for Sea, Army and Air Cadet on-water activities.

2. This order supersedes A-CR-CCP-030/ PT-001 Watercraft Safety Orders for Cadets dated 18 April 1988 and is effective upon receipt.

3. This order amplifies the following Acts, Regulations and Orders:

a. Small Craft Operator Program (SCOP) to include:

(1) CATO 14-19;

(2) SCOP Assessment Guide A-CR-050-SC0/PC-001; and

(3) SCOP Instructor Guides A-CR-050-SC0/PH-001;

b. CANFORGEN 047/03 Interim CF Aquatics and Water Safety Policy;

c. CFAO 9-58 Adventure Training;

d. CFAO 50-10 Scuba Sports Diving;

e. CATO 14-10 Scuba Diving;

f. The Criminal Code of Canada; and

g. The following sections of the Canada Shipping Act:

(1) Competency of Operators of Pleasure Craft Regulations;

(2) Small Vessel Regulations;

(3) Collision Regulations;

CHAPITRE 1

ORDONNANCES DE SÉCURITÉ NAUTIQUE

RAISON D'ÊTRE

1. La raison d'être de ces ordonnances est de servir à établir des normes minimales de sécurité en ce qui a trait aux activités de formation nautique des cadets de la marine, des cadets de l'armée et des cadets de l'air.

2. Ces ordonnances remplacent les Ordonnances de sécurité nautique pour les cadets A-CR-CCP-030/PT-001 du 18 avril 1988 et entrent en vigueur dès réception.

3. Ces ordonnances complètent les Ordres et Règlements suivants :

a. Programme d'opérateur d'embarcation légère (POEL) incluant :

(1) OAIC 14-19;

(2) Guide des contrôles du POEL A-CR-050-SC0/PC-001; et

(3) Les guides d'instructeur du POEL A-CR-050-SC0/PH-002;

b. CANFORGEN 047/03 Politique Temporaire des FC sur les Sports et la Sécurité Nautique;

c. OAFC 9-58 Exercices d'entraînement aux risques;

d. OAFC 50-10 Plongée Sportive Autonome;

e. OAIC 14-10 Plongée sous-marine;

f. Le Code criminel du Canada; et

g. Les articles suivants de la Loi sur la marine marchande du Canada :

(1) Règlement sur la compétence des plaisanciers;

(2) Règlement sur les petits bâtiments;

(3) Règlement sur les abordages;

(4) Boating Restriction Regulations; and

(5) Charts and Nautical Publications Regulations.

AUTHORITY

4. The Director of Cadets is responsible for establishing the policy on minimum safety requirements for cadet on-water activities. The Commanding Officers of Regional Cadet Support Units are responsible for certifying instructors and the conduct of on-water activities. Regions may impose regional orders to cover local conditions and amplify this order.

5. Notwithstanding this order, personal safety shall in all circumstances take priority over other considerations.

APPLICATION

6. This order applies to all on-water activities by Sea, Army, and Air Cadets, to include:

a. using watercraft regardless of the ownership of the watercraft;

b. any approved activity under the direction or supervision of a member of the Canadian Forces (including Regular Force, Primary Reserve, Supplementary Reserve, and Cadet Instructor Cadre) and Civilian Instructor; and

c. any on-water cadet activity, regardless of location or ownership of facilities used.

DEFINITIONS

7. For the purposes of this order:

a. The term “on-water” shall apply to the activities of power boating, rowing, sailing, canoeing, kayaking, swimming and scuba diving.

(4) Règlement sur les restrictions à la conduite des bateaux; et

(5) Règlement sur les cartes marines et les publications nautiques.

RESPONSABILITÉ

4. Le directeur des cadets est responsable de l’établissement de la politique relative aux normes minimales de sécurité en ce qui a trait aux activités de formation nautique des cadets. Les commandants des unités régionales de soutien des cadets sont responsables de la délivrance de brevets d’instructeurs et du déroulement des activités nautiques. Les autorités régionales peuvent imposer des ordonnances régionales adaptées aux conditions locales et qui complètent les présentes ordonnances.

5. Indépendamment de ces ordonnances, la sécurité personnelle doit l’emporter sur les autres considérations, quelles que soient les circonstances.

APPLICATION

6. Ces ordonnances s’appliquent à toutes les activités nautiques des cadets de la marine, de l’armée et de l’air, y compris :

a. l’utilisation d’embarcations, et ce peu importe qui en est le propriétaire;

b. les activités approuvées menées sous la direction ou la surveillance d’un membre des Forces canadiennes (y compris la Force régulière, la Première réserve, la Réserve supplémentaire et le cadre des instructeurs de cadets) et d’un instructeur civil; et

c. les activités nautiques auxquelles les cadets participent, et ce peu importe le lieu et le propriétaire des facilités utilisées.

DÉFINITIONS

7. Dans le cadre de ces ordonnances :

a. Le terme « nautique » s’applique aux activités de navigation à moteur, de navigation à rame, de navigation à voile, de canot, de kayak, de natation et de plongée sous-marine.

b. The term “watercraft” shall apply to sailboats, sailboards, powerboats, rowing boats, canoes, kayaks, and inflatable rafts.

c. The term “powerboat” shall apply to vessels fitted with a motor running.

d. The term “safety boat” shall apply to boats providing safety support and supervision during on-water training/activities.

e. The term “boating” shall refer to the operation of any watercraft.

f. The term “Cadet Unit” will apply to all Sea Cadet Corps, Army Cadet Corps, and Air Cadet Squadrons.

g. The term “Civilian Instructor” shall apply to a person who is employed as an instructor at a Cadet Unit or Training Centre, but who is not a member of the Canadian Forces in accordance with CFAO 49-6, Annex D Terms of Employment – Civilian Instructor Prerequisites.

h. The term “Training Centre” shall apply to the organizing body of the on-water activity (ie; CSTC, Sailing Centre, LHQ, etc.).

i. The term “non-government assets” shall apply to watercraft and/or equipment not owned or leased by DND.

j. The term “civilian contractor” shall apply to non-government professional on-water training/ recreation providers.

WATER SAFETY OFFICERS

8. Training Centres conducting on-water activities for cadets shall appoint an Officer to serve as the Water Safety Officer, responsible for all on-water activities, and shall provide Standing Orders and Standard Operating Procedures outlining, in detail, the duties and responsibilities of this officer. If

b. Le terme « embarcation » englobe les voiliers, les planches à voile, les embarcations à moteur, les embarcations à rame, les canots, les kayaks et les radeaux pneumatiques.

c. Le terme « embarcation à moteur » s’applique aux navires et embarcations propulsés à l’aide d’un moteur.

d. Le terme « bateau de sécurité » s’applique aux embarcations qui offrent du soutien axé sur la sécurité et de la supervision lors de séances de formation ou d’activités nautiques.

e. Le terme « navigation » s’applique à l’utilisation de tous les types d’embarcations.

f. Le terme « unité de cadets » s’applique à tous les corps de cadets de la marine, les corps de cadets de l’armée et les escadrons de cadets de l’air.

g. Le terme « instructeur civil » s’applique aux personnes employées à titre d’instructeurs au sein d’unités ou de centres de formation de cadets, mais qui ne font pas partie des Forces canadiennes conformément à l’annexe D – Conditions d’emploi – Conditions préalables relatives aux instructeurs civils de l’OAFC 49-6.

h. Le terme « Centre de formation » s’applique à l’autorité qui organise l’activité nautique (CIECA, Centre de voile, QGL, etc.).

i. Le terme « actif non gouvernemental » s’applique aux embarcations et/ou à l’équipement qui n’appartiennent pas ou ne sont pas loués par le MDN.

j. Le terme « fournisseur civil » s’applique aux fournisseurs professionnels d’instruction ou de loisirs nautiques non gouvernementaux.

OFFICIERS DE LA SÉCURITÉ NAUTIQUE

8. Les responsables de centres de formation où l’on offre de la formation nautique à des cadets doivent nommer un officier qui agit à titre d’officier responsable de la sécurité nautique, y compris l’ensemble des activités nautiques, et émettre des instructions permanentes d’opération et des ordres

the Water Safety Officer should not be present while an activity is being carried out, an alternate officer shall be appointed for the duration of the activity.

9. Additional personnel may be appointed to assist the Water Safety Officer, under his/her command and direction.

10. Appointment of the Water Safety Officer shall be made:

a. by the Cadet Unit Commanding Officer, in consultation with the appropriate Cadet Detachment;

b. by the Commanding Officer of a Cadet Summer Training Centre; or

c. by the Commanding Officer of a Regional Cadet Sailing Centre (or other Regional Training Centre).

SUPERVISION OF ON WATER ACTIVITIES

11. All on water cadet activities, whether for the purpose of training or recreation, shall be directly supervised by a CIC Officer or Civilian Instructor.

STANDING ORDERS AND STANDARD OPERATING PROCEDURES

12. The Regional Standing Orders and Standard Operating Procedures (SOSOPs) shall cover the following:

a. Safety Orders specific to the on-water training activity (see Chapters 2-7 for specifications); and

b. Additional safety rules appropriate to the location or the nature of the local on-water training activity.

13. The SOSOPs, together with this Order, shall be readily available to all persons engaged in or supervising on-water training activities.

permanents contenant la description détaillée des fonctions et des responsabilités de ce dernier. Si l'officier responsable de la sécurité nautique n'est pas présent lors de l'activité, alors un autre officier devra-t-être nommé pour la durée de l'activité.

9. On peut également nommer des officiers adjoints responsables de la sécurité nautique qui appuient l'officier responsable de la sécurité de la formation nautique, sous la direction de ce dernier.

10. L'officier responsable de la sécurité nautique sont nommés :

a. par le commandant de l'unité de cadets, de concert avec le détachement de cadets concerné;

b. par le commandant d'un centre d'instruction d'été de cadets; ou

c. par le commandant d'un centre de voile régional de cadets (ou d'un autre Centre de formation régional).

SUPERVISION DES ACTIVITÉS SUR L'EAU

11. Toutes les activités d'instruction et de récréation sur l'eau des cadets devront-être directement sous la supervision d'un officier du CIC ou d'un instructeur civil.

ORDRES PERMANENTS ET INSTRUCTIONS PERMANENTES D'OPÉRATION

12. Les ordres permanents et instructions permanentes d'opération (OPIPO) régionaux doivent porter sur les éléments suivants :

a. Ordonnances de sécurité propres aux activités de formation nautiques (voir Chapitres 2 à 7 pour les détails); et

b. Des règles de sécurité supplémentaires, selon la nature de l'activité de formation nautique et les conditions locales.

13. Les OPIPO, de même que la présente ordonnance doivent être accessibles à toutes les personnes qui participent à des activités de formation nautiques ou qui les supervisent.

SITE SAFETY EQUIPMENT

14. All Training Centres and Cadet units conducting on-water training shall be equipped with:

a. one Class N First Aid Kit, kept in a waterproof container and easily accessible;

b. Class 5B Fire Extinguisher; and

c. access to a telephone, satellite telephone, or VHF radio.

15. All personnel conducting on-water training activities shall be aware of cadets' medical conditions (MEDIC ALERT, allergies, sensitivity to stings, etc.).

PERSONAL FLOATATION DEVICES

16. Cadets are only authorized to wear "Cadet" Personal Floatation Devices (PFDs) that have been provided by DND (unless otherwise stated in these orders). They must be worn during all on-water activities, except for swimming, which is covered in Chapter 6. Officers and Civilian Instructors are authorized to wear personally owned PFDs that have been approved by the Department of Transportation / Canadian Coast Guard IAW the Canada Shipping Act Small Vessel Regulations.

17. PFD's must also be worn:

a. when on a dock or jetty; and

b. within 3 metres or less from the shoreline, prior to or upon completion of an on-water activity.

18. PFD's are not required to be worn:

a. 3 metres or less from the shoreline, if not participating in an on-water activity; and

MATÉRIEL DE SÉCURITÉ DES LIEUX

14. Les unités de cadets et les centres de formation au sein desquels on offre de la formation nautique doivent être munis du matériel suivant :

a. une trousse de premiers soins de classe N, conservée dans un contenant étanche et accessible;

b. un extincteur de classe 5B; et

c. un téléphone, téléphone satellite ou une radio VHF accessible.

15. Tous les membres des effectifs qui dirigent des activités de formation nautiques doivent être au courant des troubles médicaux des cadets (MEDIC ALERT, allergies, sensibilité aux piqûres, etc.).

VÊTEMENTS DE FLOTTAISON INDIVIDUELS

16. Sauf indication contraire dans ces ordonnances, seul le vêtement de flottaison individuel (VFI) « Cadet » fourni par le MDN est approuvé à titre de dispositif de flottaison pour les cadets qui participent à des activités nautiques. Le port de ce VFI est obligatoire durant toutes les activités de formation nautiques, sauf la natation, traitée au Chapitre 6. Les officiers et les instructeurs civils peuvent porter un VFI personnel approuvé par le ministère des Transports et la Garde Côtière Canadienne selon l'article sur le règlement sur les petits bâtiments de la loi sur la marine marchande du Canada.

17. Les VFI sont obligatoires dans les contextes suivants :

a. Lorsqu'on se trouve sur un quai ou une jetée;

b. Lorsqu'on se trouve à une distance de trois mètres ou moins du rivage, avant ou à la fin d'une activité nautique.

18. Les VFI ne sont pas obligatoires dans les contextes suivants :

a. Lorsqu'on se trouve à une distance de trois mètres ou moins du rivage, mais qu'on ne participe pas à une activité nautique;

b. when participating in a swimming activity under the direct supervision of a qualified Life Guard in accordance with CFAO 50-4 and CANFORGEN 047/03 – Interim CF Aquatics and Water Safety Policy.

19. The PFD shall always be worn over the outer layer of clothing. When worn, the PFD must have all fasteners and tighteners secured as they are intended to be used. A properly fitted PFD should be snug around the cadet's upper body when in or out of the water. The PFD should not ride up to the cadet's face when all fasteners and tighteners are fitted and secured. If it is "riding up" under these conditions, a smaller size is required.

20. Sea Cadets participating in deployments with the Canadian Coast Guard (CCG), Naval Reserves, or the Canadian Navy are authorized to wear Floatation Devices issued by the ship.

21. Cadets participating in International Exchange Programs are authorized to wear Floatation Devices issued by the host country.

22. Care should be exercised that any fixtures on the PFD are used for intended and approved purpose. Any alteration to a PFD will void its approval.

23. PFD's may lose buoyancy over time. For this reason, buoyancy testing should be completed periodically. This can be done by donning the PFD, wading in the water waist deep, bringing your knees up to your chest, and checking the buoyancy. In addition, PFD's should also be checked regularly for rips, tears, and damage to seams, buckles and straps, water logging, mildew, shrinking or hardening of buoyant materials.

24. Care of PFD's should include storing PFD's only when dry and in cool, ventilated areas. Mild soap and water is used to clean PFDs. **Do not** dry-clean, alter, use harsh cleaners, attach to a boat, leave in sun for extended periods, put heavy objects on PFD, or use as a kneeling pad or cushion.

b. Lorsqu'on participe à une activité de natation sous la surveillance d'un sauveteur qualifié, selon les OAFC 50-4 et les CANFORGEN 047/03 - Politique Temporaire des FC sur les Sports et la Sécurité Aquatique.

19. Le VFI doit toujours être porté par-dessus tous les vêtements. Lorsqu'on porte un VFI, toutes les attaches et les courroies doivent être attachées fermement comme il se doit. En principe, le VFI doit être ajusté au niveau du tronc supérieur du cadet, que ce soit dans l'eau ou hors de l'eau. Lorsqu'un cadet essaie un VFI, celui-ci ne doit pas remonter à la hauteur de sa figure, une fois que les fermoirs et les courroies sont fermement attachés. Lorsque le VFI « remonte » dans ce contexte, il faut une taille plus petite.

20. Les cadets de la marine qui participent à des déploiements de concert avec la Garde côtière canadienne (GCC), la Réserve navale ou la Marine canadienne peuvent porter des dispositifs de flottaison propres à l'embarcation.

21. Les cadets qui participent à des programmes d'échange internationaux peuvent porter des dispositifs de flottaison fournis par le pays hôte.

22. On doit veiller à ce que les dispositifs des VFI soient utilisés de la manière prévue et approuvée. Toute modification apportée à un VFI entraîne l'annulation de son homologation.

23. Les VFI peuvent perdre leur flottabilité au fil du temps. Pour cette raison, la flottabilité des VFI devrait être vérifiée de façon périodique À cet égard, on peut porter un VFI pendant que l'on se trouve dans l'eau jusqu'à la taille et remonter les genoux jusqu'à la poitrine. De plus, on doit examiner régulièrement les VFI pour y relever, le cas échéant, des fentes, des déchirures ou des dommages aux coutures, aux boucles ou aux courroies, de l'engorgement, de la moisissure ou le rétrécissement ou le durcissement de matériaux de flottage.

24. Afin de prévenir la détérioration des VFI, on doit les ranger uniquement lorsqu'ils sont secs et dans des locaux frais et ventilés. On les nettoie à l'eau, à l'aide d'un savon doux. **Ne pas** nettoyer les VFI à sec, les modifier, les nettoyer avec un nettoyant robuste, les attacher à une embarcation, ni les exposer au soleil de façon prolongée; ne pas déposer d'objets lourds sur les VFI, ni les utiliser en guise de coussins, notamment pour les genoux.

WATER AND AIR TEMPERATURES

25. All personnel shall be instructed in hypothermia – its causes, signs and symptoms, and treatment – before undertaking their duties. Such instruction shall be included in the training of cadets involved in boating training of any type.

26. Water Safety Officers shall bear in mind the dangers of hypothermia when planning on-water activities at the beginning or end of the season. Colder weather requires:

a. Warm clothing;

b. Closer supervision by the instructors;

c. Facilities to warm personnel in the event of inclement weather;

d. The ability to respond to a distressed boat in 5 minutes or less; and

e. A lower “recall point” for wind and weather conditions.

27. All personnel shall also be instructed in the danger of excessive exposure to the sun – causes, symptoms and treatment. Supplies of sunscreen/sunblock should be available to all personnel.

28. Clothing worn by cadets shall be suitable for conditions. Both water and air temperatures should be considered. A fully clothed person with a squall suit retains body heat in cold water much longer than a lightly clad person. Training should not be conducted when personnel are improperly attired.

USE OF CIVILIAN CONTRACTORS AND NON-GOVERNMENT ASSETS

29. The use of civilian contractors and/or non-government assets for on-water cadet training/activities, whether provided free of charge or paid for using public, non-public or private funds, may be authorized by the RCSU provided the following minimum requirements are met:

TEMPÉRATURE DE L’EAU ET DE L’AIR

25. Tous les membres d’équipage doivent recevoir de la formation au sujet de l’hypothermie, y compris les causes, les signes et symptômes et les soins, avant d’entrer en fonction. Ce type d’enseignement doit être intégré à la formation de cadets qui suivent des cours portant sur la navigation, quel que soit le type.

26. Les officiers responsables de la sécurité nautique doivent tenir compte des risques d’hypothermie lorsqu’ils planifient des activités sur l’eau au début ou à la fin de la saison de navigation. Par temps froid, ce type de navigation exige les éléments suivants :

a. Vêtements chauds;

b. Surveillance plus minutieuse des instructeurs;

c. Installations où les membres d’équipage peuvent se réchauffer en cas de météo défavorable;

d. Capacité d’intervenir auprès d’un navire en détresse en cinq minutes ou moins; et

e. « Seuil de rappel » plus bas selon la vitesse du vent et les conditions météorologiques.

27. Tous les membres d’équipage doivent également être renseignés sur le danger de l’exposition excessive au soleil, y compris les causes, les symptômes et les soins. On doit leur fournir des provisions de filtre solaire et d’écran total.

28. La tenue des cadets doit être adaptée aux conditions. La température de l’eau et de l’air doit être prise en compte. Une personne tout habillée qui porte un coupe-vent conserve la chaleur de son corps dans l’eau froide beaucoup plus longtemps qu’une personne légèrement vêtue. La formation ne doit pas avoir lieu si les membres d’équipage ne sont pas adéquatement vêtus.

EMPLOI DE FOURNISSEURS CIVILS ET D’ACTIFS NON GOUVERNEMENTAUX

29. L’emploi de fournisseurs civils et/ou d’actifs non gouvernementaux pour de l’instruction ou des activités nautiques de cadets, qu’elles soient offertes gratuitement ou payées avec des fonds publics, non-publics ou privés, peuvent être autorisées par l’URSC si les conditions minimales suivantes sont remplies :

a. PFDs or lifejackets provided are DOT approved, in good repair, and properly fit the individual;

b. Watercraft to be used are in good repair and deemed seaworthy;

c. All watercraft are equipped with the minimum safety equipment appropriate to the size of the watercraft in accordance with Small Vessel Regulations;

d. Safety boat ratios required for the activity are adhered to; and

e. The OIC must ensure that the owner or operator of the vessel carries liability insurance and any special qualification required to operate the vessel (e.g., CF Tender Charge or Coast Guard boating safety certification).

a. les VFI ou les gilets de sauvetage fournis sont approuvés par le ministère des transports et sont en bonne condition;

b. les embarcations utilisées sont en bonne condition et en bon état de navigabilité;

c. toutes les embarcations sont équipées de l’équipement de sécurité minimal approprié selon les dimensions de l’embarcation, conformément aux Règlement sur les petits bâtiments;

d. Le rapport d’embarcation de sécurité doit être respecté et approprié selon l’activité pratiquée; et

e. L'officier responsable (O Resp) doit s'assurer que le propriétaire et exploitant du navire possède une assurance-responsabilité et les qualifications particulières requises pour exploiter le navire (p. ex., certification de Prise en charge de navire auxiliaire des FC ou de sécurité nautique de la Garde côtière).

CHAPTER 2

POWERBOAT SAFETY ORDERS

GENERAL

1. These orders shall apply to all power vessels used for cadet activities, regardless of the ownership.

2. For the purposes of these orders, a sailboat under auxiliary power shall be considered a powerboat.

3. This section applies to the general operation of powerboats in cadet training. The additional equipment and operator qualifications required for safety boat operations during specific activities are covered in chapters 3, 4 and 5.

AUTHORITY

4. The Director of Cadets is responsible for establishing policy. The Commanding Officers of Regional Cadet Support Units are responsible for qualifying and certifying powerboat operators and approving powerboat activities.

REGIONAL STANDING ORDERS AND STANDARD OPERATING PROCEDURES (SOSOPs)

5. The Regional SOSOPs established for powerboats shall include:

a. Classification of Small Craft Operators in accordance with the Small Craft Operator Program;

b. Action to be taken in the event of an emergency, including the method of contacting medical, fire and police agencies;

c. Systems of control, including warning signals, whistles, alarms and search and rescue methods and procedures;

d. User prerequisites and certification requirements;

CHAPITRE 2

ORDONNANCES SUR LA SÉCURITÉ DES EMBARCATIONS À MOTEUR

GÉNÉRALITÉS

1. Ces ordonnances doivent s'appliquer à toutes les embarcations à moteur utilisées pour les activités de cadets, quel que soit le propriétaire.

2. Dans le cadre de ces ordonnances, les voiliers propulsés par de l'énergie auxiliaire sont considérés comme des embarcations à moteur.

3. La présente section s'applique à l'utilisation générale d'embarcations à moteur dans le cadre de la formation de cadets. L'équipement supplémentaire et les compétences exigées des responsables de bateaux de sécurité lors d'activités spécifiques sont décrits aux chapitres 3, 4 et 5.

RESPONSABILITÉ

4. Le directeur des cadets est responsable de l'établissement de la politique. Les commandants d'unités régionales de soutien de cadets sont responsables de la vérification des compétences et de la délivrance de certificats de cadets, de même que de l'approbation des activités d'embarcations à moteur.

ORDRES PERMANENTS ET INSTRUCTIONS PERMANENTES D'OPÉRATION (OPIPO)

5. Les OPIPO régionaux établis pour les embarcations à moteur englobent les éléments suivants :

a. Classification des utilisateurs de petites embarcations selon le Programme d'opérateur d'embarcations légères;

b. Mesures à prendre en cas d'urgence, notamment pour communiquer avec les services médicaux, de police et d'incendies;

c. Systèmes de contrôle, y compris les signaux d'alarme, les sifflets, les alarmes et les méthodes et procédures de recherche et sauvetage;

d. Les conditions préalables et les conditions relatives à la délivrance de brevets;

e. Specific prohibitions, including details on reserved or restricted areas;

f. Control of the number of boats on the water at any one given time;

g. Physical security arrangements, including securing powerboats when not on the water;

h. Administration of the boathouse;

i. The repair and maintenance of watercraft;

j. Management procedures, including delegated authorities;

k. Mandatory types of powerboat apparel;

l. Instructions regarding special and common hazards; and

m. Terms of reference for each management, supervisory, maintenance and custodial position, including the individual responsibilities for emergency and security procedures.

INHERENT FLOATATION

6. All powerboats 6 m or less in length used for cadet training shall have inherent floatation permitting them, while equipped with a motor, to remain afloat when capsized or completely filled with water.

7. Floatation should be tested prior to the start of water sport operations for the year and again on any occasion when a boat has received damage that might interfere with the effectiveness of the floatation. The most effective method to check floatation is trial immersion (substituting a suitable weight for the motor). However, floatation should be checked by the most effective practicable method.

OVERPOWERING AND OVERLOADING

8. All powerboats 6 m or less in length used for cadet activities shall have affixed to the hull capacity and conformity plates/labels issued by the CCG and Transport Canada Marine Safety. The capacity plate

e. Interdictions précises, y compris des renseignements détaillés relatifs aux zones réservées ou réglementées;

f. Contrôle ponctuel du nombre d'embarcations qui naviguent;

g. Dispositions relatives à la sécurité physique, y compris l'amarrage des embarcations à moteur lorsqu'elles ne naviguent pas;

h. Administration du hangar à bateaux;

i. Réparation et entretien de véhicules marins;

j. Procédures de gestion, y compris les pouvoirs délégués;

k. Types d'agrès obligatoires à bord d'embarcations à moteur;

l. Directives relatives à des dangers particuliers et courants; et

m. Attributions propres à chaque poste de direction, de supervision, d'entretien et de garde, y compris les responsabilités relatives aux procédures d'urgence et de sécurité.

FLOTTABILITÉ PROPRE

6. Toutes les embarcations à moteur longues de 6 mètres ou moins utilisées pour la formation de cadets doivent avoir une flottabilité propre qui leur permet, alors qu'elles sont équipées d'un moteur, de rester à flot quand elles ont chaviré ou qu'elles sont remplies d'eau.

7. La flottabilité doit être testée avant le début des activités nautiques de l'année et chaque fois que l'endommagement d'un bateau menacera l'efficacité de la flottabilité. La méthode la plus efficace pour tester la flottabilité est par des essais d'immersion (en substituant un poids convenable au moteur). Toutefois, lorsqu'il n'est pas possible de procéder à des essais d'immersion, la flottabilité doit être vérifiée en employant la méthode utilisable la plus efficace.

SURMOTORISATION ET SURCHARGE

8. Toutes les embarcations à moteur de six mètres ou moins utilisées pour la formation des cadets doivent être munies d'une plaque de conformité et de capacité fixée sur la coque et

lists the recommended maximum engine power and load, these limits shall not be exceeded on any occasion.

délivrée par la Garde Côtière Canadienne et Transports Canada. La plaque de capacité indique la charge et la puissance maximales recommandées pour ce type d'embarcation. Ces limites ne doivent jamais être dépassées.

9. What is considered a safe load in calm water may be dangerous in heavy weather. In adverse conditions, reduce the number of people in the boat. **Do not overload.**

9. Une charge sécuritaire en eau calme peut être dangereuse par mauvais temps. Lorsque les conditions atmosphériques sont défavorables, diminuer le nombre de personnes à bord. **Ne pas surcharger une embarcation.**

EQUIPMENT

10. In accordance with the Small Vessel Regulations, powerboats 6 metres or less in length shall carry:

a. One Department of Transportation (DOT) / Canadian Coast Guard approved PFD or Lifejacket of appropriate size for each person on board (these orders further stipulate that the PFD/Lifejacket shall be worn at all times);

b. One buoyant heaving line of not less than 15 metres in length;

c. One manual propelling device (i.e. paddle or oar) or an anchor with not less than 15 metres of cable, rope or chain in any combination;

d. One Class 5BC fire extinguisher, if the pleasure craft is equipped with an inboard engine, a fixed fuel tank of any size, or a fuel burning cooking, heating or refrigerating appliance;

e. One bailer or one manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

f. A watertight flashlight or 3 Canadian approved flares of TYPE A, B or C (these orders recommend that the watertight flashlight be the option of choice for vessels of this size);

g. A sound signalling device or a sound signalling appliance;

ÉQUIPEMENT

10. Conformément au Règlement sur les petits bâtiments, les embarcations à moteur longues de six mètres ou moins doivent comprendre :

a. Un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord (de plus, ces ordonnances stipulent que le VFI/gilet de sauvetage doit être porté en tout temps);

b. Une ligne d'attrape flottante longue d'au moins 15 mètres;

c. Un dispositif de propulsion manuel (pagaie ou rame) ou une ancre munie d'un câble, d'une corde ou d'une chaîne, quel que soit l'agencement, d'une longueur d'au moins 15 mètres;

d. Un extincteur de classe 5BC, pour les embarcations avec moteur intérieur, un réservoir à combustible fixe de n'importe quelle taille ou un appareil de cuisson, de chauffage ou de réfrigération à combustible;

e. Une écope ou une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser du côté de l'embarcation;

f. Une lampe de poche étanche ou trois fusées éclairantes de type A, B ou C, approuvées par les autorités canadiennes (la présente ordonnance recommande l'utilisation de la lampe de poche étanche comme dispositif sur ce type d'embarcation);

g. Un avertisseur sonore ou un appareil de signalisation sonore;

h. Navigation lights that meet the applicable standards set out in the Collision Regulations if the pleasure craft is operated after sunset and before sunrise or in periods of restricted visibility.

i. A reboarding device if the freeboard of the vessel is greater than 0.5 metres;

11. In accordance with the Small Vessel Regulations, powerboats over 6 metres in length but not over 8 metres in length shall be equipped with:

a. One DOT / CCG approved PFD or lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metres in length or one approved lifebuoy with an outside diameter of 610 mm or 762 mm that is attached to buoyant line of not less than 15 metres in length;

c. A reboarding device if the freeboard of the vessel is greater than 0.5 metres;

d. One manual propelling device (ie: paddle or oar) or an anchor with not less than 15 metres of cable, rope or chain in any combination;

e. One bailer or one manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

f. One Class 5BC fire extinguisher, if the pleasure craft is equipped with an inboard engine, plus another 5BC fire extinguisher if the pleasure craft is equipped with a fuelburning cooking, heating or refrigerating appliance;

g. A watertight flashlight;

h. Des feux de route conformes aux normes applicables établies dans les règlements sur les abordages, pour les embarcations de plaisance utilisées entre le coucher du soleil et le lever du jour ou en période de visibilité réduite.

i. un dispositif de rembarquement, lorsque le franc-bord de l'embarcation est supérieur à 0,5 mètre;

11. Conformément au Règlement sur les petits bâtiments, les embarcations à moteur longues de plus de six mètres mais de pas plus de huit mètres doivent comprendre :

a. un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. une ligne d'attrape flottante longue d'au moins 15 mètres ou une bouée de sauvetage approuvée d'un diamètre extérieur de 610 mm ou de 762 mm reliée à une ligne d'attrape flottante longue d'au moins 15 mètres;

c. un dispositif de rembarquement, lorsque le franc-bord de l'embarcation est supérieur à 0,5 mètre;

d. un dispositif de propulsion manuel (pagaie ou rame) ou une ancre munie d'un câble, d'une corde ou d'une chaîne, quel que soit l'agencement, d'une longueur d'au moins 15 mètres;

e. une écope ou une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser du côté de l'embarcation;

f. un extincteur de classe 5BC, pour les embarcations avec moteur intérieur, un réservoir à combustible fixe de n'importe quelle taille ou un appareil de cuisson, de chauffage ou de réfrigération à combustible;

g. une lampe de poche étanche;

h. 6 Canadian approved flares of Type A, B or C. Exempt from carrying pyrotechnic distress signals if:

(1) operating in a river, canal or lake in which at no time more than one nautical mile from shore; or

(2) engaged in an official competition or in final preparation for an official competition and has no sleeping arrangements.

i. A sound signalling device or a sound signalling appliance; and

j. Navigation lights that meet the applicable standards set out in the Collision Regulations if the pleasure craft is operated after sunset and before sunrise or in periods of restricted visibility.

12. In accordance with the Small Vessel Regulations, powerboats over 8 metres in length but not over 12 metres in length must be equipped with:

a. One DOT / CCG approved PFD or lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metres in length;

c. One approved lifebuoy with an outside diameter of 610 mm or 762 mm that is attached to buoyant line of not less than 15 metres in length;

d. A reboarding device if the freeboard of the vessel is greater than 0.5 metres;

e. An anchor with not less than 30 metres of cable, rope or chain in any combination;

f. One bailer;

h. six fusées éclairantes de type A, B ou C approuvées par les autorités canadiennes. Ceci n'inclut pas le transport de signaux de détresse pyrotechnique si :

(1) les embarcations naviguent sur une rivière, un chenal ou un lac et ne se trouvent jamais à plus d'un mille marin du rivage;

(2) les embarcations participent à une épreuve officielle ou effectuent les derniers préparatifs en vue d'une épreuve officielle et ne comportent pas de matériel de couchage.

i. un avertisseur sonore ou un appareil de signalisation sonore;

j. des feux de route conformes aux normes applicables établies dans les règlements sur les abordages, pour les embarcations de plaisance utilisées entre le coucher du soleil et le lever du jour ou en période de visibilité réduite.

12. Conformément au Règlement sur les petits bâtiments, les embarcations à moteur longues de plus de huit mètres mais de pas plus de 12 mètres doivent comprendre :

a. un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. une ligne d'attrape flottante longue d'au moins 15 mètres;

c. une bouée de sauvetage approuvée d'un diamètre extérieur de 610 mm ou de 762 mm reliée à une ligne d'attrape flottante longue d'au moins 15 mètres;

d. un dispositif de rembarquement, lorsque le franc-bord de l'embarcation est supérieur à 0,5 mètre;

e. une ancre munie d'un câble, d'une corde ou d'une chaîne, quelle que soit la combinaison, d'une longueur d'au moins 30 mètres;

f. une écope;

g. One manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

h. One Class 10BC fire extinguisher, plus another 10BC fire extinguisher if the pleasure craft is equipped with a fuel burning cooking, heating or refrigerating appliance;

i. A watertight flashlight;

j. 12 Canadian approved flares of Type A, B, C or D, not more than 6 of which are of Type D. Exempt from carrying pyrotechnic distress signals if:

(1) operating in a river, canal or lake in which at no time more than one nautical mile from shore; or

(2) engaged in an official competition or in final preparation for an official competition and has no sleeping arrangements.

k. A sound signalling device or a sound signalling appliance; and

l. Navigation lights that meet the applicable standards set out in the Collision Regulations.

13. In accordance with the Small Vessel Regulations, powerboats over 12 metres in length but not over 20 metres in length shall be equipped with:

a. One DOT / CCG approved PFD or Lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metres in length;

c. One approved lifebuoy with an outside diameter of 610 mm or 762 mm that is equipped with a self-igniting light and is attached to buoyant line of not less than 15 metres in length;

g. une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser du côté de l'embarcation;

h. un extincteur de classe 10BC, et un second extincteur de même classe, pour les embarcations de plaisance dotées d'un appareil de cuisson, de chauffage ou de réfrigération à combustible;

i. une lampe de poche étanche;

j. douze fusées éclairantes de type A, B, C ou D, mais un maximum de six de type D, approuvées par les autorités canadiennes. Ceci n'inclut pas le transport de signaux de détresse pyrotechnique si :

(1) les embarcations naviguent sur une rivière, un chenal ou un lac et ne se trouvent jamais à plus d'un mille marin du rivage;

(2) les embarcations participent à une épreuve officielle ou effectuent les derniers préparatifs en vue d'une épreuve officielle et ne comportent pas de matériel de couchage.

k. un avertisseur sonore ou un appareil de signalisation sonore;

l. des feux de route conformes aux normes applicables établies dans les règlements sur les abordages.

13. Conformément au Règlement sur les petits bâtiments, les embarcations à moteur longues de plus de 12 mètres mais de pas plus de 20 mètres doivent comprendre :

a. un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. une ligne d'attrape flottante longue d'au moins 15 mètres

c. une bouée de sauvetage approuvée d'un diamètre extérieur de 610 mm ou de 762 mm, munie d'un dispositif lumineux automatique et reliée à une ligne d'attrape flottante longue d'au moins 15 mètres;

d. A reboarding device;

e. An anchor with not less than 50 metres of cable, rope or chain in any combination;

f. Bilge pumping installations;

g. One Class 10BC fire extinguisher at each of the following locations:

(1) At each access to any space where a fuelburning cooking, heating or refrigerating appliance is fitted;

(2) At the entrance to any accommodation space; and

(3) At the entrance to the engine room.

h. 1 axe;

i. 2 buckets, each with a capacity of 10 litres or more;

j. A watertight flashlight;

k. 12 Canadian approved flares of Type A, B, C or D, not more than 6 of which are of Type D;

l. 2 sound signalling appliances (bell and whistle); and

m. Navigation lights that meet the applicable standards set out in the Collision Regulations.

WEARING PERSONAL FLOATATION DEVICES

14. Powerboats 6 metres or Less in length. PFD's shall be worn by all personnel while on the water, regardless of water and weather conditions.

15. Powerboats over 6 metres in length not equipped with cabin accommodations (i.e. whalers and cutters under power). PFDs shall be worn by all personnel while on the water, regardless of water and weather conditions.

d. un dispositif de rembarquement;

e. une ancre munie d'un câble, d'une corde ou d'une chaîne, quelle que soit la combinaison, d'une longueur d'au moins 50 mètres;

f. des installations d'épuisement de cale;

g. un extincteur de classe 10BC à chacun des emplacements suivants :

(1) aux accès d'emplacements d'appareils de cuisson, de chauffage ou de réfrigération à combustible;

(2) à l'entrée de chaque cabine, s'il y a lieu;

(3) à l'entrée de la salle des machines.

h. une hache;

i. deux seaux d'une capacité d'au moins 10 litres chacun;

j. une lampe de poche étanche;

k. douze fusées éclairantes de type A, B, C ou D, approuvées par les autorités canadiennes, mais un maximum de six de type D;

l. deux appareils de signalisation sonore (cloche et sifflet);

m. des feux de route conformes aux normes applicables établies dans les règlements sur les abordages.

PORT DE VÊTEMENTS DE FLOTTAISON INDIVIDUELS

14. Embarcations à moteur longues de six mètres ou moins. Tous les membres de l'équipage doivent porter des vêtements de flottaison individuels lorsqu'ils se trouvent sur l'eau, quelles que soient les conditions atmosphériques ou l'état du plan d'eau.

15. Embarcations à moteur longues de plus de six mètres, sans cabine (p. ex., baleinières et cotres propulsés au moyen d'un moteur). Tous les membres de l'équipage doivent porter des vêtements de flottaison individuels lorsqu'ils se trouvent sur l'eau, quelles que soient les conditions atmosphériques ou l'état du plan d'eau.

16. Powerboats over 6 metres in length, but not over 8 metres in length, equipped with cabin accommodation. PFD's shall be worn by all personnel while the vessel is underway, except those below decks. Personnel leaving the cabin area shall put on their PFDs before coming on deck.

17. Powerboats over 8 metres in length, equipped with cabin accommodation. PFD's shall be worn, while the vessel is underway by all personnel except those below decks or within a cockpit or similar area.

18. These requirements shall not apply to cadets on ships, unless otherwise stated by local boathouse orders or ship standing orders.

OPERATOR QUALIFICATIONS

19. All operators of powerboats shall complete the appropriate modules of the Small Craft Operator Program or equivalent training. In addition all operators shall carry their Pleasure Craft Operator Card (PCOC) with them at all times while operating a watercraft.

20. All operators of powerboats shall hold as a minimum a SCOP Module 1 (PCOC) and SCOP Module 4 certification or equivalent. However, operators holding only this minimum requirement may only operate watercraft for the purpose of point-to-point transportation. **They may not operate a watercraft in a supervisory role during on-water cadet activities (i.e. Safety boat).** For the purpose of routine operation in the general vicinity (within sight) of the docking area, a second individual, in addition to the operator, is not required (unless otherwise stipulated in local SOSOP). If the vessel is to be operated outside the vicinity of the docking area, a second individual shall be onboard.

16. Embarcations à moteur longues de plus de six mètres mais de pas plus de huit mètres et équipées de cabines. Tous les membres de l'équipage doivent porter des vêtements de flottaison individuels lorsque le bateau est en route, sauf les personnes se trouvant dans les cabines. Les personnes qui montent sur le pont doivent d'abord revêtir leurs vêtements de flottaison individuels.

17. Embarcations à moteur longues de plus de huit mètres et équipées de cabines. Tous les membres d'équipage doivent porter des vêtements de flottaison individuels lorsque le bateau est en route, à l'exception de ceux qui se trouvent à l'intérieur de l'embarcation, dans le cockpit ou dans un endroit similaire.

18. Ces exigences ne s'appliquent pas aux cadets se trouvant à bord de navires, à moins d'indications contraires dans les ordonnances des hangars de bateaux locales ou les ordonnances permanentes de navires.

QUALIFICATION DES UTILISATEURS D'EMBARCATIONS

19. Tous les utilisateurs d'embarcations à moteur doivent effectuer les modules pertinents du Programme d'Opérateur d'Embarcations Légères ou une formation équivalente.. De plus, les opérateurs devront avoir en leur possession la Carte de conducteur d'embarcation de plaisance (CCEP) en tous temps lorsqu'ils opèrent une embarcation.

20. Tous les utilisateurs d'embarcations à moteur doivent détenir au moins un brevet de POEL Module 1 et de POEL Module 4 ou une qualification équivalente. Toutefois, pour les opérateurs qui se soumettent à ces conditions minimales doivent uniquement opérer des embarcations pour se déplacer d'un point à un autre. **Ils ne doivent pas opérer une embarcation dans un rôle de supervision au cours d'un activité nautique auquel les cadets participent (i.e. Bateau de sécurité).** Un deuxième individu, en plus de l'opérateur n'est pas requis pour les besoins d'opération de routines dans la région immédiate (distance a vu) du quai (à moins qu'autrement stipulé dans L'OPIPO local). Si l'embarcation est opérer à l'extérieur de la région immédiate du quai, un deuxième individu doit être à bord.

21. **All persons operating a powerboat for the purpose of a "safety boat"** are required to have, as a minimum, SCOP Module 1, 3 and 4 certification or equivalent (including emergency first aid). A second responsible person, holding either SCOP Module 1 and 4 certification OR well trained and evaluated in the operation of powerboats, and appointed by the Water Safety Officer, shall be in the safety boat to assist the operator. If VHF radio is used as the safety boat's means of communication, the operator must also hold a VHF radio operator certificate (SCOP Module 2). For other safety boat requirements specific to the activity, see the applicable chapter.

21. **Toutes les personnes qui utilisent une embarcation à moteur tenant lieu de « bateau de sécurité »** doivent détenir, au minimum les Modules 1, 3 et 4 du POEL ou les équivalents (incluant le secourisme d'urgence). Une deuxième personne responsable, détenant une certification de POEL Modules 1 et 4 ou ayant été évaluée sur la conduite d'embarcations moteurs et étant nommée par l'Officier de Sécurité Nautique, doit être présente dans l'embarcation de sécurité afin d'assister l'opérateur. Si une radio VHF est utilisée comme moyen de communication à bord de l'embarcation de sécurité, le conducteur doit aussi détenir le certificat d'opérateur restreint de radio maritime (Module 2 du POEL). Des spécifications quant aux qualifications supplémentaires nécessaires pour la conduite d'embarcations de sécurité selon le type d'activité sont énoncées dans les prochains chapitres.

WIND AND WEATHER

22. It is not possible to lay down precise rules to govern the safety of powerboat use under all conditions and in all locations. In deciding whether a powerboat should be used, Water Safety Officers should be guided by the following factors:

a. Wind velocity;

b. Wave action;

c. The degree of protection of the water area to be traversed;

d. The size of the boat(s);

e. The experience of the operator(s);

f. The nature, purpose, and duration of the boating activity; and

g. The weather forecast.

23. **Storm Threatening.** Powerboats out when a storm threatens should head for the nearest safe anchorage.

VENTS ET CONDITIONS ATMOSPHÉRIQUES

22. Il n'est pas possible d'établir des règles précises quant à la sécurité d'utilisation des embarcations à moteur dans toutes les conditions et sur tous les types de plan d'eau. Les officiers responsables de la sécurité de la formation nautique devraient, en ce qui concerne l'utilisation des embarcations à moteur, fonder leurs décisions sur les facteurs suivants :

a. la vitesse du vent;

b. le type de vagues;

c. le degré de protection offert au plan d'eau à traverser;

d. la taille du (des) bateau(x);

e. l'expérience du (des) responsable(s) de l'embarcation;

f. la nature, le but et la durée de l'activité nautique;

g. les prévisions météorologiques.

23. **Menace de tempête.** Quand une tempête menace, les embarcations à moteur devraient se diriger vers l'ancrage protégé le plus près.

NIGHT OPERATION

24. **Authority.** Operation of power vessels of any size between sunset and sunrise shall be carried out only with the approval of the Commanding Officer of Regional Cadet Support Units. In boating facilities where night operation is a regular or usual occurrence, the Water Safety Officer shall develop night operation orders, approved by the Commanding Officer of the Regional Cadet Support Unit, covering any special precautions applicable to the location and types of boats in use.

25. **Navigation Lights.** All powerboats being operated between sunset and sunrise shall be equipped with operating navigation lights as required under the Collision Regulations.

WATER-SKIING

26. Cadets are not authorized to participate in water-skiing activities.

HAZARDOUS OPERATION

27. **Wash.** Operators of powerboats shall avoid creating a wash that may be hazardous to smaller boats, canoes, or anchored boats. In general, boats should slow down to avoid wash. (Bear in mind, however, that a planning hull creates more wash at medium speed than at high speed. Such a boat may maintain high speed in open water, if safe to do so. On approaching confined waters, where both low speed and low wash are desirable, a planning boat should slow down well before the confined area is reached.)

28. **Speed.** Powerboats shall be operated at a safe speed for the conditions and size of boat, bearing in mind such factors as the width of channels and the presence or absence of other water traffic. Speed shall be reduced in adverse weather conditions, in conditions of reduced visibility, in heavy traffic areas, and in the vicinity of swimmers. All speed limits shall be obeyed.

NAVIGATION DE NUIT

24. **Responsabilité.** Entre le coucher et le lever du soleil, on ne pourra utiliser une embarcation à moteur, quelle que soit sa taille, qu'avec l'approbation du commandant de l'unité régionale de soutien des cadets. Dans les installations nautiques où la navigation de nuit se pratique d'une manière régulière ou habituelle, l'officier responsable de la sécurité de la formation nautique devra élaborer des ordonnances de navigation de nuit, approuvées par le commandant des unités régionales de soutien des cadets, couvrant toutes les précautions spéciales applicables au lieu de navigation et au type de bateaux utilisés.

25. **Feux de route.** Toutes les embarcations à moteur utilisées entre le coucher et le lever du soleil devront être équipées de feux de route en état de marche comme l'exige le règlement sur les abordages.

SKI NAUTIQUE

26. Les cadets ne sont pas autorisés à pratiquer le ski nautique.

CONDUITE DANGEREUSE

27. **Sillage.** Les utilisateurs d'embarcations à moteur doivent éviter de créer un sillage qui peut constituer un danger pour des embarcations plus petites, des canots ou des bateaux ancrés. En général, pour éviter de créer un sillage trop important, les embarcations doivent ralentir. Cependant, il ne faut pas oublier qu'une coque planante engendre un sillage plus important à vitesse moyenne qu'à grande vitesse. Un tel bateau pourra donc conserver une vitesse élevée en eau libre si cela est sécuritaire. Toutefois, à l'approche d'un plan d'eau confiné où il est souhaitable à la fois d'aller lentement et de faire un peu de sillage, un bateau à coque planante doit ralentir bien avant d'atteindre la zone en question.

28. **Vitesse.** Les embarcations à moteur doivent être utilisées à une vitesse sécuritaire en rapport avec les conditions ambiantes et la taille du bateau, l'utilisateur devant tenir compte de facteurs tels que la largeur des chenaux et la présence ou l'absence de trafic maritime. La vitesse doit être réduite lorsque le temps est mauvais, la visibilité diminuée dans les zones de trafic dense, et à proximité de nageurs. Toutes les limites de vitesse doivent être respectées.

29. **Horseplay.** Horseplay in powerboats is forbidden under any circumstances. It is a form of showing off which has no place in Cadet operations and is extremely dangerous. Any incident of horseplay by a powerboat operator shall be occasion for disciplinary action and could result in the suspension of Operator qualifications.

29. **Jeux brutaux.** Les jeux brutaux dans des embarcations à moteur sont interdits en toutes circonstances. Il s'agit d'une forme d'exhibitionnisme qui n'a pas sa place au sein des cadets et qui est extrêmement dangereuse. Tout incident résultant de jeux brutaux dans le cadre du maniement d'une embarcation à moteur doit entraîner des mesures disciplinaires. Si ces jeux brutaux sont importants ou répétés, le coupable doit perdre le privilège de l'utilisation d'une embarcation à moteur.

30. **Criminal Offences.** Operation of a powerboat by an operator who has consumed alcohol or drugs (including prescription and non-prescription medicines that may have side effects) is absolutely prohibited. Reckless or impaired operation of a vessel is an indictable offence under the Criminal Code of Canada.

30. **Délits criminels.** La conduite dangereuse d'une embarcation ou son utilisation par une personne qui a consommé de l'alcool ou de la drogue (y compris des médicaments prescrits ou en vente libre susceptibles d'avoir des effets secondaires) est interdite. La conduite dangereuse ou avec facultés amoindries d'une embarcation constitue un délit punissable en vertu du Code criminel du Canada.

SAFE FUELLING PRACTICES

31. The powerboat operator should abide by the following routine while fuelling:

a. Ensuring Boat is securely moored.

b. Ensuring all personnel are ashore, so you don't have to worry about passengers if a problem occurs;

c. No smoking;

d. Take portable tanks ashore;

e. Close hatches and doors, to prevent fumes from going inboard;

f. No electrical switching, switches sometimes produce sparks;

g. Dip (sound) tanks or check gauges, to determine capacity and prevent overfilling;

h. Extinguish all open flames;

i. Check the fuel type at the nozzle;

MÉTHODES SÉCURITAIRES DE RAVITAILLEMENT EN CARBURANT

31. Les utilisateurs d'embarcations à moteur doivent respecter les pratiques sécuritaires de ravitaillement en carburant suivantes :

a. S'assurer que le bateau est bien amarré.

b. S'assurer que tout l'équipage se trouve à terre. Si un problème survient, on n'aura pas à se préoccuper des passagers.

c. Ne pas fumer.

d. Apporter les réservoirs portatifs à terre.

e. S'assurer que les cloisons et les écoutilles sont fermés. Si des vapeurs s'échappent, elles ne pénétreront pas à l'intérieur.

f. Ne pas actionner de commutateur électrique. Les commutateurs produisent quelquefois des étincelles.

g. Vérifier le niveau des réservoirs avec une jauge à main ou à cadran. Déterminer la capacité du réservoir pour éviter de faire déborder le combustible.

h. Éteindre toutes les flammes.

i. Vérifier le combustible à la buse.

j. Hold hose nozzle firmly against deckplate, as a precaution against static electricity;

k. Take fuel at correct rate, so you don't overtax the filler pipes and vents;

l. Replace deckplate covers;

m. Wipe up any spillage, use a paper towel rather than a rag. Properly dispose of soiled paper towel;

n. Open up and ventilate. Use bilge blower for a minimum of five minutes, if you have one;

o. Test for vapour;

p. Start engines;

q. Re-embark personnel; and

r. Cast off.

32. All powerboat operators should have this routine, or a similar drill, firmly in their minds. Cleanliness is a powerful weapon against fire. Bilges should be kept clean and should be inspected before starting; if any doubt exists, do not start. A clean boat seldom burns.

33. Fuel fires are boating's greatest hazard. They are easy to prevent but hard to extinguish and can do irreparable damage. Do not let them have a chance to start. Knowledge and care are your defence.

34. All fuelling practices must be environmentally safe and in accordance with the Canadian Cadet Movement TREEs program and Regional Environmental Management Systems.

BOATING ACCIDENTS

35. Ensure that your Regional SOSOPs cover the action to be taken in the event of a boating accident.

j. Coller fermement la buse du tuyau contre le nable de pont. C'est une précaution contre l'électricité statique.

k. Régler le débit d'arrivée du carburant. Ne pas imposer un trop grand effort aux tuyaux et aux aérateurs.

l. Replacer le bouchon de nable.

m. Essuyer tout carburant qui pourrait avoir débordé. Utiliser une serviette de papier plutôt qu'un chiffon. Jeter les chiffons souillés de façon appropriée;

n. Ouvrir et aérer. Se servir du ventilateur de cale, si l'on en a un.

o. Surveiller les vapeurs.

p. Mettre les moteurs en marche.

q. Faire rembarquer les membres d'équipage.

r. Larguer les amarres.

32. Tous les utilisateurs doivent avoir cette méthode, ou un exercice convenable similaire, bien ancré dans la tête. La propreté est une arme efficace contre le feu. Les fonds doivent demeurer propres et doivent être inspectés avant le départ; dans le doute, ne pas partir. Il est rare qu'un bateau propre brûle.

33. À bord d'un bateau, c'est le carburant qui constitue le principal danger de feu. Ce genre d'incendie est facile à empêcher mais difficile à éteindre. De plus, il peut entraîner des dommages irréparables. Ne pas laisser à ce genre d'incidents des possibilités de se produire. Les connaissances et la vigilance permettent d'éviter ce type d'incendie.

34. Toutes les pratiques de ravitaillement en carburant doivent être sans danger pour l'environnement et conformes au programme TREES de l'Organisation des cadets du Canada et les Systèmes de Gestion de l'Environnement Régionaux.

ACCIDENTS NAUTIQUES

35. S'assurer que les OPIPO régionaux prévoient les mesures à prendre en cas d'accident nautique.

36. It is a requirement that assistance be provided, by any other boats, to the boat in trouble, unless it is obvious that the crew of the boat in difficulties can solve the problem without assistance, or that appropriate assistance is already being rendered.

37. All personnel are reminded that it is an indictable offence under the Criminal Code of Canada, i.e., a **criminal** offence to fail to stop at the scene of a boating accident.

36. L'équipage des autres navires, le cas échéant, doit fournir de l'assistance à celui de l'embarcation qui éprouve des difficultés, sauf s'il est évident que ce dernier peut résoudre le problème lui-même ou qu'il reçoit déjà de l'assistance appropriée.

37. On rappelle à tous les membres d'équipage que la négligence de s'arrêter sur les lieux d'un accident de navigation constitue une infraction punissable par mise en accusation en vertu du Code criminel du Canada, c'est-à-dire un délit **criminel**.

CHAPTER 3

ROWING SAFETY ORDERS

GENERAL

1. These orders shall apply to all vessels propelled by oars and used for cadet training, regardless of the ownership of the vessels.

2. For the purpose of these orders, a vessel usually propelled by sail or power shall be considered a rowing boat while under oars (i.e. whalers and cutters).

3. Whaler and cutter exercises do not require a safety boat. However, if the whaler(s) and/or cutter(s) are not fitted with a motor, a powered support boat is required. The operator of the support boat must be qualified in SCOP modules 1 and 4 minimum.

AUTHORITY

4. The Director of Cadets is responsible for establishing policy. The Commanding Officer of Regional Cadet Support Units is responsible for appointing instructors and approving activities.

REGIONAL STANDING ORDERS AND STANDARD OPERATING PROCEDURES (SOSOPs)

5. The Regional SOSOPs established for rowing activities shall include:

a. Action to be taken in the event of an emergency, including the method of contacting medical, fire and police agencies;

b. Systems of control, including warning signals, whistles, alarms and search and rescue methods and procedures;

c. User prerequisites, including requirements in swimming ability and requirements in rowing ability;

d. Specific prohibitions, including details on reserved or restricted areas;

CHAPITRE 3

ORDONNANCES DE SÉCURITÉ POUR LA NAVIGATION À RAME

GÉNÉRALITÉS

1. Ces ordonnances doivent s'appliquer à toutes les embarcations propulsées à la rame et utilisées pour la formation des cadets, quel que soit le propriétaire de ces embarcations.

2. Dans le cadre de ces ordonnances, un bateau généralement propulsé par une voile ou par un moteur doit être considéré comme un bateau à rames lorsqu'il navigue à la rame (p. ex., des baleinières et des cotres).

3. Les exercices effectués à bord de baleinières ou de cotres ne nécessitent pas la présence d'une embarcation de sécurité. Cependant, si les baleinières ou cotres ne sont pas munis d'un moteur, une embarcation de soutien à moteur est requise. L'opérateur de l'embarcation de soutien doit être qualifié selon les modules 1 et 4 du POEL.

RESPONSABILITÉ

4. Le directeur des cadets est responsable de l'établissement de la politique. Le commandant des unités régionales de soutien des cadets est responsable de la nomination des instructeurs et de l'approbation des activités.

ORDRES PERMANENTS ET INSTRUCTIONS PERMANENTES D'OPÉRATION (OPIPO)

5. Les OPIPO régionaux établis relativement à la navigation à la rame devraient comprendre :

a. Mesures à prendre en cas d'urgence, notamment pour communiquer avec les services médicaux, de police et d'incendies;

b. Systèmes de contrôle, y compris les signaux d'alarme, les sifflets, les alarmes, ainsi que les méthodes et procédures de recherche et sauvetage;

c. Conditions préalables visant les utilisateurs, y compris les compétences requises en natation;

d. Interdictions précises, y compris des renseignements détaillés relatifs aux zones réservées ou réglementées;

e. Control of the number of persons using the rowing boats at any one given time;

f. Physical security arrangements, including hours of operation;

g. Management procedures, including delegated authorities;

h. Mandatory types of rowing apparel;

i. Instructions regarding special and common hazards; and

j. Terms of reference for each management, supervisory, maintenance and custodial position, including the individual responsibilities for emergency and security procedures.

EQUIPMENT

6. In accordance with Small Vessel Regulations, rowing boats not over 6 metres in length shall be equipped with:

a. One DOT / CCG approved PFD or lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metre in length;

c. One manual propelling device (ie: paddle or oar) or an anchor with not less than 15 metres of cable, rope or chain in any combination;

d. One bailer or one manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

e. A sound signalling device or a sound signalling appliance;

f. Navigation lights that meet the applicable standards set out in the Collision Regulations if the pleasure craft is operated after sunset and before sunrise or in periods of restricted visibility; and

e. Contrôle ponctuel du nombre d'utilisateurs d'embarcations;

f. Dispositions relatives à la sécurité physique, y compris les heures d'activité;

g. Procédures de gestion, y compris le pouvoir délégué;

h. Matériel obligatoire d'embarcations à rames;

i. Directives relatives aux dangers particuliers et courants;

j. Attributions propres à chaque poste de direction, de supervision, d'entretien et de garde, y compris les responsabilités relatives aux procédures d'urgence et de sécurité.

ÉQUIPEMENT

6. Conformément au Règlement sur les petits bâtiments, les embarcations à moteur longues de six mètres ou moins doivent comprendre :

a. Un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. Une ligne d'attrape flottante longue d'au moins 15 mètres;

c. Un dispositif de propulsion manuel (pagaie ou rame) ou une ancre munie d'un câble, d'une corde ou d'une chaîne, quel que soit l'agencement, d'une longueur d'au moins 15 mètres;

d. Une écope ou une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser du côté de l'embarcation;

e. Un avertisseur sonore ou un appareil de signalisation sonore;

f. Des feux de route conformes aux normes applicables établies dans les règlements sur les abordages, pour les embarcations de plaisance utilisées entre le coucher du soleil et le lever du jour ou en période de visibilité réduite; et

g. A reboarding device if the freeboard of the vessel is greater than 0.5 metres.

7. In accordance with Small Vessel Regulations, rowing boats over 6 metres in length but not over 8 metres in length shall be equipped with:

a. One DOT / CCG approved PFD or Lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metres in length or one approved lifebuoy with an outside diameter of 610 mm or 762 mm that is attached to buoyant line of not less than 15 metres in length;

c. A reboarding device if the freeboard of the vessel is greater than 0.5 metres;

d. One manual propelling device OR an anchor with not less than 15 metres of cable, rope or chain in any combination;

e. One bailer or one manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

f. A watertight flashlight;

g. 6 Canadian approved flares of Type A, B or C. Exempt from carrying pyrotechnic distress signals if:

(1) operating in a river, canal or lake in which at no time be more than one nautical mile from shore; or

(2) Engaged in an official competition or in final preparation for an official competition and has no sleeping arrangements.

g. un dispositif de rembarquement, lorsque le franc-bord de l'embarcation est supérieur à 0,5 mètre.

7. Conformément au Règlement sur les petits bâtiments, les embarcations à rames longues de plus de six mètres mais de pas plus de huit mètres doivent comprendre :

a. Un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. Une ligne d'attrape flottante longue d'au moins 15 mètres ou une bouée de sauvetage approuvée d'un diamètre extérieur de 610 mm ou de 762 mm reliée à une ligne d'attrape flottante longue d'au moins 15 mètres;

c. Un dispositif de rembarquement, lorsque le franc-bord de l'embarcation est supérieur à 0,5 mètre;

d. Un dispositif de propulsion manuel (pagaie ou rame) ou une ancre munie d'un câble, d'une corde ou d'une chaîne, quel que soit l'agencement, d'une longueur d'au moins 15 mètres;

e. Une écope ou une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser du côté de l'embarcation;

f. Une lampe de poche étanche;

g. Six fusées éclairantes de type A, B ou C approuvées par les autorités canadiennes. Ceci n'inclut pas le transport de signaux de détresse pyrotechnique si :

(1) les embarcations naviguent sur une rivière, un chenal ou un lac et ne se trouvent jamais à plus d'un mille marin du rivage;

(2) les embarcations participent à une épreuve officielle ou effectuent les derniers préparatifs en vue d'une épreuve officielle et ne comportent pas de matériel de couchage.

h. A sound signalling device or a sound signalling appliance; and

i. Navigation lights that meet the applicable standards set out in the Collision Regulations if the pleasure craft is operated after sunset and before sunrise or in periods of restricted visibility.

8. In accordance with Small Vessel Regulations, rowing boats over 8 metres in length but not over 12 metres in length must be equipped with:

a. One DOT / CCG approved PFD or lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metres in length;

c. One approved lifebuoy with an outside diameter of 610 mm or 762 mm that is attached to buoyant line of not less than 15 metres in length;

d. A reboarding device if the freeboard of the vessel is greater than 0.5 metres;

e. An anchor with not less than 30 metres of cable, rope or chain in any combination;

f. One bailer;

g. One manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

h. A watertight flashlight;

i. 12 Canadian approved flares of Type A, B, C or D, not more than 6 of which are of Type D. Exempt from carrying pyrotechnic distress signals if:

(1) operating in a river, canal or lake in which at no time be more than one nautical mile from shore; or

h. Un avertisseur sonore ou un appareil de signalisation sonore;

i. Des feux de route conformes aux normes applicables établies dans les règlements sur les abordages, pour les embarcations de plaisance utilisées entre le coucher du soleil et le lever du jour ou en période de visibilité réduite.

8. Conformément au Règlement sur les petits bâtiments, les embarcations à moteur longues de plus de huit mètres mais de pas plus de 12 mètres doivent comprendre :

a. Un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. Une ligne d'attrape flottante longue d'au moins 15 mètres;

c. Une bouée de sauvetage approuvée d'un diamètre extérieur de 610 mm ou de 762 mm reliée à une ligne d'attrape flottante longue d'au moins 15 mètres;

d. Un dispositif de rembarquement, lorsque le franc-bord de l'embarcation est supérieur à 0,5 mètre;

e. Une ancre munie d'un câble, d'une corde ou d'une chaîne, quelle que soit l'agencement, d'une longueur d'au moins 30 mètres;

f. Une écope;

g. Une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser du côté de l'embarcation;

h. Une lampe de poche étanche;

i. Douze fusées éclairantes de type A, B, C ou D, mais un maximum de six de type D, approuvées par les autorités canadiennes. Exempts de l'obligation de transporter des dispositifs pyrotechniques de signalisation de détresse, dans les situations suivantes :

(1) les embarcations naviguent sur une rivière, un chenal ou un lac et ne se trouvent jamais à plus d'un mille marin du rivage;

(2) engaged in an official competition or in final preparation for an official competition and has no sleeping arrangements.

j. A sound signalling device or a sound signalling appliance; and

k. Navigation lights that meet the applicable standards set out in the Collision Regulations.

9. In addition, the following equipment is recommended:

a. One spare oar;

b. Two boat hooks;

c. Magnetic compass;

d. One spare rescue assisting device;

e. Fenders;

f. VHF radio;

g. Two foil and plastic rescue blankets (or two wool blankets in waterproof bag);

h. One Class C First Aid Kit;

i. Boats Bag including palm & needle, twine, marlinspike, beeswax, spare crutch, flashlight, spare batteries, and one pair hand semaphore flags.

WEARING PERSONAL FLOATATION DEVICE

10. **Rowing boats 6 metres or less in length.** PFDs shall be worn by all personnel, while on the water, regardless of water and weather conditions.

11. **Rowing boats over 6 metres in length not equipped with cabin accommodation (i.e. whalers and cutters).** PFDs shall be worn by all personnel, while on the water, regardless of water and weather conditions.

(2) les embarcations participent à une épreuve officielle ou effectuent les derniers préparatifs en vue d'une épreuve officielle et ne comportent pas de matériel de couchage.

j. Un avertisseur sonore ou un appareil de signalisation sonore;

k. Des feux de route conformes aux normes applicables établies dans les règlements sur les abordages.

9. De plus, l'équipement suivant est recommandé :

a. Une rame de secours;

b. Deux gaffes;

c. Une boussole magnétique;

d. Une bouée de sauvetage Kisbie;

e. Ballons de défense;

f. Radio VHF;

g. deux couvertures de sauvetage en aluminium et matière plastique (ou deux couvertures de laine placées dans un sac étanche);

h. Trousse de premiers soins de classe A;

i. Trousse de navire comprenant une aiguille à main, une ficelle, un épissoir, de la cire d'abeille, un tolet de secours, une lampe de poche, des batteries de rechange et une paire de fanions de signalisation à bord.

PORT DES VÊTEMENTS DE FLOTTAISON INDIVIDUELS

10. **Bateaux à rames longs de six mètres ou moins.** Tous les membres d'équipage doivent porter des vêtements de flottaison individuels lorsqu'ils se trouvent sur l'eau, quelles que soient les conditions atmosphériques ou l'état du plan d'eau.

11. **Bateaux à rames longs de plus de six mètres, sans cabine (p. ex., baleinières et cotres propulsés au moyen d'une voile).** Tous les membres de l'équipage doivent porter des vêtements de flottaison individuels lorsqu'ils se trouvent sur l'eau, quelles que soient les conditions atmosphériques ou l'état du plan d'eau.

SHOES

12. Soft-soled shoes shall be worn at all times in any rowing boat. Open-toed shoes (i.e. sandals) are not authorized for wear in whalers or cutters.

WIND AND WEATHER

13. It is not possible to lay down precise rules to govern rowing safety under all conditions and in all locations. In deciding whether to permit rowing, consider the following factors:

a. Wind velocity;

b. The type (s) of boats in use;

c. The experience and skills of the crews and coxswain;

d. The water and air temperatures;

e. The degree of protection of the rowing area;

f. Known local conditions of weather and wave action; and

g. The marine weather forecast.

14. **Thunderstorms.** Thunderstorms may produce very dangerous rowing conditions. At the first sign of a thunderstorm, all boats should be recalled.

NIGHT OPERATION

15. **Authority.** Operation of rowing boats between sunset and sunrise shall be carried out only with the approval of the Commanding Officer of the Regional Cadet Support Unit. In general, it is recommended that such operation be restricted to large boats (i.e. motor or sail training vessels equipped with navigation lights).

CHAUSSURES

12. Les passagers d'embarcations à rames doivent porter des souliers à semelle molle en tout temps. Le port de chaussures à bout ouvert (p. ex., des sandales) n'est pas autorisé à bord de baleinières et de cotres.

VENTS ET CONDITIONS ATMOSPHÉRIQUES

13. Il n'est pas possible d'établir des règles précises quant à la sécurité d'utilisation des embarcations à rames dans toutes les conditions et sur tous les types de plan d'eau. Les officiers responsables de la sécurité de la formation nautique devraient, en ce qui concerne l'utilisation des embarcations à rames, fonder leurs décisions sur les facteurs suivants :

a. La vitesse du vent;

b. Le (s) type (s) d'embarcations utilisée (s);

c. L'expérience et les compétences de l'équipage et du patron;

d. La température de l'eau et de l'air;

e. Le degré de protection offert au plan d'eau à traverser;

f. Les connaissances relatives aux conditions météorologiques locales et à l'action des vagues;

g. Les prévisions météorologiques maritimes.

14. **Orages.** Les orages peuvent créer des conditions très dangereuses pour les embarcations à rames. Dès qu'un orage menace, toutes les embarcations doivent être rappelées.

NAVIGATION DE NUIT

15. **Responsabilité.** Les bateaux à rames ne doivent être utilisés entre le coucher et le lever du soleil qu'avec l'approbation du commandant de l'unité régionale de soutien des cadets. En général, on recommande qu'une telle utilisation soit limitée à des embarcations importantes. (ex. embarcations à voile ou à moteur équipées de feux de navigation).

16. **Lights.** The Collision Regulations require that a flashlight or lighted lantern showing a white light be exhibited in time to prevent a collision. However, in boats equipped with proper navigation lights, such navigation lights shall be used.

16. **Feux de route.** Le règlement sur les abordages exige qu'une lampe de poche ou une lanterne dotée d'une lumière blanche soit exhibée à temps pour prévenir un abordage. Toutefois, à bord d'embarcations qui peuvent être utilisées comme voiliers ou embarcations à moteur et qui sont équipées de feux de route, les feux de route doivent être utilisés.

17. **General Precautions for Night Activities.** In addition to the above, the following general precautions apply to all night activities:

a. Where several vessels are rowing in company, special care must be taken that they do not become separated;

b. Greater than usual care must be taken with navigation; A careful lookout must be maintained to avoid collision; A careful assessment of weather, (present and forecast) is required. Weather that could be quite safe for day rowing may be dangerous at night;

c. In tidal areas, a knowledge of local tides and tidal currents is essential to navigation in darkness;

d. When possible, means should be found for informing the home base of arrival at the destination so that a search may be instituted in the event of non-arrival by a specified time;

e. A trip plan must be filed with the Water Safety Officer prior to departure.

f. Where radio communication is available and practicable, it should be used;

17. **Précautions générales relatives à la navigation de nuit.** Outre les mesures ci-dessus, les précautions générales suivantes s'appliquent à la navigation de nuit :

a. Lorsque plusieurs embarcations à rames naviguent ensemble, on doit faire preuve de vigilance afin qu'ils ne s'éloignent pas les uns des autres;

b. On doit évaluer minutieusement la météo (actuelle et prévue). Des conditions très sûres pour la navigation de jour peuvent entraîner un danger la nuit;

c. Dans les zones de marée, la connaissance de la marée et des courants périodiques est essentielle à la navigation dans l'obscurité;

d. Dans la mesure du possible, on doit trouver le moyen d'aviser le port d'attache de l'arrivée à destination, afin que des opérations de recherche puissent être mises en œuvre si le bateau n'est pas arrivé à une heure précise;

e. On doit déposer un plan de route auprès de l'officier responsable de la sécurité nautique avant le départ.

f. Lorsque la communication radio est accessible et possible, on doit l'utiliser;

OVERLOADING

18. Overloading is dangerous and will not be permitted. Ensure the authorized number of personnel for the boat is not exceeded.

SURCHARGE

18. Il est dangereux de surcharger des bateaux à rames et cela ne doit pas être autorisé. On doit s'assurer de ne pas dépasser le nombre autorisé de personnes à bord.

CHAPTER 4

SAILING SAFETY ORDERS

GENERAL

1. These orders shall apply to all cadet sailing activities, regardless of the ownership of the sailing vessels.

2. These orders touch on the operation of powerboats insofar as they are used as safety boats in a sailing activity. For the general operation of powerboats by or in association with cadet activities, see Chapter 2.

3. On the water **sail training** can only be supervised by a certified CYA Sail Instructor in a safety boat. Any CYA certification can only be done by a registered CYA certified sail instructor. **Recreational sailing** activities or "free sailing", where cadets have already received prior sail training, can be supervised by a safety boat operated by a sail instructor or an individual holding SCOP Module 1, 3 and 4 certification or equivalent (including emergency first aid). In both cases the safety boat ratio, as described in paragraphs 21 and 22, shall be adhered to. If all qualified instructors and/or safety boat operators are cadets, there must be a CIC Officer or CI present on the water at all times during the conduct of the activity.

AUTHORITY

4. The Director of Cadets is responsible for establishing policy. The Commanding Officer of Regional Cadet Support Units is responsible for appointing certified sailing instructors and approving sailing activities.

REGIONAL STANDING ORDERS AND STANDARD OPERATING PROCEDURES (SOSOPs)

5. The Regional SOSOPs established for sailing shall include:

a. Action to be taken in the event of an emergency, including the method of contacting medical, fire and police agencies;

CHAPITRE 4

ORDONNANCES DE SÉCURITÉ POUR LA NAVIGATION À VOILE

GÉNÉRALITÉS

1. Ces ordonnances doivent s'appliquer à toutes les embarcations à voile utilisées pour la formation de cadets, quel que soit le propriétaire de ces embarcations.

2. Ces ordonnances s'appliquent à l'utilisation d'embarcations à moteur, dans la mesure où ces dernières sont utilisées comme bateaux de sécurité dans un programme de voile. En ce qui concerne l'utilisation générale de bateaux à moteur par des cadets ou conjointement avec des cadets, on consultera le Chapitre 2.

3. Les **activités de formation/entraînement à voile** doivent se dérouler sous la surveillance d'un instructeur de voile doté d'un certificat de l'ACY à bord d'une embarcation de sécurité. Seul un instructeur de voile détenteur d'un certificat de l'ACY peut émettre des certificats de l'ACY. **Les activités de voile récréatives ou libres**, lorsque les cadets ont déjà reçu une formation préalable, peuvent être supervisées par une embarcation de sécurité opérée par un instructeur de voile ou un détenteur des Modules 1, 3 et 4 du POEL ou leur équivalent civil (incluant le secourisme d'urgence). Dans les deux cas, le ratio d'embarcations de sécurité décrit aux paragraphes 21 et 22 doit être appliqué. Dans le cas ou tous les instructeurs et/ou opérateurs d'embarcation de sécurité sont des cadets, il doit avoir un officier CIC ou instructeur civil présent sur le plan d'eau durant toute la durée de l'activité.

RESPONSABILITÉ

4. Le directeur des cadets est responsable de l'établissement de la politique. Le commandant des unités régionales de soutien des cadets est responsable de la nomination d'instructeurs de voile dotés d'un certificat et de l'approbation d'activités de navigation à voile.

ORDRES PERMANENTS ET INSTRUCTIONS PERMANENTES D'OPÉRATION (OPIPO)

5. Les OPIPO régionaux établies relativement à la navigation à voile doivent comprendre :

a. Mesures à prendre en cas d'urgence, notamment pour communiquer avec les services médicaux, de police et d'incendies;

b. Systems of control, including warning signals, whistles, alarms and search and rescue methods and procedures;

c. User prerequisites, and requirements in sailing ability;

d. Specific prohibitions, including details on reserved or restricted areas;

e. Control of the number of boats on the water at any one given time;

f. Physical security arrangements, including securing sailboats when not sailing;

g. Administration of the boathouse;

h. The repair and maintenance of watercraft;

i. Management procedures, including delegated authorities;

j. Mandatory types of sailing apparel;

k. Instructions regarding special and common hazards; and

l. Terms of reference for each management, supervisory, maintenance and custodial position, including the individual responsibilities for emergency and security procedures.

FLOATATION

6. All sailboats used by cadets shall be capable of remaining afloat when capsized or completely filled with water.

7. **Sailboats 6 metres or less in length.** The integrity of the floatation systems shall be tested by trial immersion prior to the start of sailing activities for the year and again on any occasion when a boat has received damage that might interfere with the effectiveness of the floatation.

b. Systèmes de contrôle, y compris les signaux d'alarme, les sifflets, les alarmes et les méthodes et procédures de recherche et sauvetage;

c. Conditions préalables visant les utilisateurs et compétences requises en matière de navigation à voile;

d. Interdictions précises, y compris des renseignements détaillés relatifs aux zones réservées ou réglementées;

e. Contrôle ponctuel du nombre d'embarcations qui naviguent;

f. Dispositions relatives à la sécurité physique, y compris l'amarrage des embarcations à voile lorsqu'elles ne naviguent pas;

g. Administration du hangar à bateaux;

h. Réparation et entretien de véhicules marins;

i. Procédures de gestion, y compris les pouvoirs délégués;

j. Types d'agrès obligatoires à bord d'embarcations à voile;

k. Directives relatives à des dangers particuliers et courants;

l. Attributions propres à chaque poste de direction, de supervision, d'entretien et de garde, y compris les responsabilités relatives aux procédures d'urgence et de sécurité.

FLOTTABILITÉ

6. Tous les voiliers utilisés par les cadets doivent pouvoir rester à flot lorsqu'ils ont chaviré ou qu'ils sont complètement remplis d'eau.

7. **Voiliers longs de six mètres ou moins.** L'efficacité des systèmes de flottabilité doit être vérifiée par des essais d'immersion avant le début des activités de voile de l'année et chaque fois que l'endommagement d'un bateau menace l'efficacité du système de flottabilité.

8. **Sailboats over 6 metres in length.** Where trial immersion is practicable, this should be performed (as in paragraph 6). Where this is not practicable, the floatation system should be inspected and checked by the most effective practicable method prior to the start of sailing activities for the year.

EQUIPMENT

9. In accordance with Small Vessel Regulations, Sailboards shall be equipped with:

a. One DOT / CCG approved PFD or Lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metres in length;

c. One manual propelling device;

d. A watertight flashlight or 3 Canadian approved flares of TYPE A, B or C (these orders recommend that the watertight flashlight be the option of choice for vessels of this size);

e. This equipment (paragraph 10 b, c, d) is not mandatory if all people on the sailboard are wearing a DOT / CCG approved PFD of appropriate size or engaged in an official competition; and

f. A sound signalling device or a sound signalling appliance.

10. In accordance with Small Vessel Regulations, Sailboats 6 metres or less in length shall be equipped with:

a. One DOT / CCG approved PFD or Lifejacket of appropriate size for each person on board (these orders further stipulate that the PFD/Lifejacket shall be worn at all times);

8. **Voiliers longs de plus de six mètres.** Lorsqu'il est possible de procéder à des essais d'immersion, ceux-ci doivent être effectués tel qu'indiqué au paragraphe 6. Lorsque ce type d'essai n'est pas réalisable, on procédera à l'inspection et à la vérification du système de flottabilité par la méthode utilisable la plus efficace avant le début des activités de voile de l'année.

ÉQUIPEMENT

9. Conformément au Règlement sur les petits bâtiments, les planches à voile doivent être équipées des éléments suivants :

a. un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. une ligne d'attrape flottante longue d'au moins 15 mètres;

c. un dispositif propulseur manuel;

d. Une lampe de poche étanche ou trois fusées éclairantes de type A, B ou C, approuvées par les autorités canadiennes (la présente ordonnance recommande l'utilisation de la lampe de poche étanche comme dispositif sur ce type d'embarcation);

e. L'équipement décrit aux paragraphes 10b, c et d n'est pas obligatoire lorsque tous les passagers portent un vêtement de flottaison individuel approuvé par le Ministère des Transports et la Garde Côtière Canadienne et participent à une épreuve officielle; et

f. Un avertisseur sonore ou un appareil de signalisation sonore.

10. Conformément au Règlement sur les petits bâtiments, les embarcations à voile longues de six mètres ou moins doivent comprendre les éléments suivants :

a. un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord (ces ordonnances stipulent que le VFI/gilet de sauvetage doit être porté en tout temps);

b. One buoyant heaving line of not less than 15 metres in length;

c. One manual propelling device or an anchor with not less than 15 metres of cable, rope or chain in any combination;

d. One Class 5BC fire extinguisher, if the sailboat is equipped with an inboard engine, a fixed fuel tank of any size or a fuel-burning cooking, heating or refrigerating appliance;

e. One bailer or one manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel. A bailer or manual water pump is not required for any self-bailing sealed hull sailing vessel fitted with a recess-type cockpit that cannot contain a sufficient quantity of water to make the vessel capsize or a multi-hull vessel that has subdivided multiple-sealed hull construction;

f. A sound signalling device or a sound signalling appliance; and

g. Navigation lights that meet the applicable standards set out in the Collision Regulations if the pleasure craft is operated after sunset and before sunrise or in periods of restricted visibility.

11. In accordance with Small Vessel Regulations, Sailboats over 6 metres in length but not over 8 metres in length shall be equipped with:

a. One DOT / CCG approved PFD or Lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metres in length or one approved lifebuoy with an outside diametre of 610 mm or 762 mm that is attached to buoyant line of not less than 15 metres in length;

b. une ligne d'attrape flottante longue d'au moins 15 mètres;

c. une ancre ou un dispositif propulseur manuel muni d'un câble, d'une corde ou d'une chaîne, ou d'une combinaison de ceux-ci, d'une longueur d'au moins 15 mètres;

d. un extincteur de classe 5BC, lorsque l'embarcation à voile est dotée d'un moteur intérieur, d'un réservoir à carburant fixe, quelle que soit la taille, ou d'un appareil de cuisson, de chauffage ou de réfrigération à combustible;

e. Une écope ou une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser par un côté de l'embarcation. Ce type d'équipement n'est pas exigé à bord des voiliers dotés d'une coque scellée auto-videuse et d'un habitacle encastré qui ne peut pas contenir suffisamment d'eau pour faire chavirer l'embarcation, ni des voiliers multicoques dotés de plusieurs coques scellées subdivisées;

f. Un avertisseur sonore ou un appareil de signalisation sonore;

g. Des feux de route conformes aux normes applicables établies dans les règlements sur les abordages, pour les embarcations de plaisance utilisées entre le coucher du soleil et le lever du jour ou en période de visibilité réduite.

11. Conformément au Règlement sur les petits bâtiments, les voiliers longs de plus de six mètres mais de pas plus de huit mètres doivent comprendre :

a. un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. une ligne d'attrape flottante longue d'au moins 15 mètres ou une bouée de sauvetage approuvée d'un diamètre extérieur de 610 mm ou de 762 mm reliée à une ligne d'attrape flottante longue d'au moins 15 mètres;

c. A reboarding device if the freeboard of the vessel is greater than 0.5 metres;

d. One manual propelling device or an anchor with not less than 15 metres of cable, rope or chain in any combination;

e. One bailer or one manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

f. One Class 5BC fire extinguisher, if the sailboat is a powerdriven vessel, plus another 5BC fire extinguisher if the sailboat is equipped with a fuel-burning cooking, heating or refrigerating appliance

g. A watertight flashlight;

h. 6 Canadian approved flares of Type A, B or C. Exempt from carrying pyrotechnic distress signals if:

(1) operating in a river, canal or lake in which at no time be more than one nautical mile from shore; or

(2) engaged in an official competition or in final preparation for an official competition and has no sleeping arrangements.

i. A sound signalling device or a sound signalling appliance; and

j. Navigation lights that meet the applicable standards set out in the Collision Regulations if the pleasure craft is operated after sunset and before sunrise or in periods of restricted visibility.

12. In accordance with Small Vessel Regulations, Sailboats over 8 metres in length but not over 12 metres in length must be equipped with:

c. un dispositif de rembarquement, lorsque le franc-bord de l'embarcation est supérieur à 0,5 mètre;

d. Un dispositif de propulsion manuel (pagaie ou rame) ou une ancre munie d'un câble, d'une corde ou d'une chaîne, quel que soit l'agencement, d'une longueur d'au moins 15 mètres;

e. Une écope ou une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser par un côté de l'embarcation;

f. Un extincteur de classe 5BC, pour les embarcations avec moteur intérieur, un réservoir à combustible fixe de n'importe quelle taille ou un appareil de cuisson, de chauffage ou de réfrigération à combustible;

g. Une lampe de poche étanche;

h. Six fusées éclairantes de type A, B ou C approuvées par les autorités canadiennes. Exempts du transport de dispositifs pyrotechniques de signalisation de détresse, dans les situations suivantes :

(1) les embarcations naviguent sur une rivière, un chenal ou un lac et ne se trouvent jamais à plus d'un mille marin du rivage;

(2) les embarcations participent à une épreuve officielle ou effectuent les derniers préparatifs en vue d'une épreuve officielle et ne comportent pas de matériel de couchage.

i. Un avertisseur sonore ou un appareil de signalisation sonore;

j. Des feux de route conformes aux normes applicables établies dans les règlements sur les abordages, pour les embarcations de plaisance utilisées entre le coucher du soleil et le lever du jour ou en période de visibilité réduite.

12. Conformément au Règlement sur les petits bâtiments, les voiliers longs de plus de huit mètres mais de pas plus de 12 mètres doivent comprendre :

a. One DOT / CCG approved PFD or Lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metres in length;

c. One approved lifebuoy with an outside diametre of 610 mm or 762 mm that is attached to buoyant line of not less than 15 metres in length;

d. A reboarding device if the freeboard of the vessel is greater than 0.5 metres;

e. An anchor with not less than 30 metres of cable, rope or chain in any combination;

f. One bailer;

g. One manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

h. One Class 10BC fire extinguisher, if the sailboat is a power driven vessel, plus another 10BC fire extinguisher if the sailboat is equipped with a fuel-burning cooking, heating or refrigerating appliance;

i. A watertight flashlight;

j. 12 Canadian approved flares of Type A, B, C or D, not more than 6 of which are of Type D. Exempt from carrying pyrotechnic distress signals if:

(1) operating in a river, canal or lake in which at no time be more than one nautical mile from shore; or

(2) engaged in an official competition or in final preparation for an official competition and has no sleeping arrangements.

a. un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. une ligne d'attrape flottante longue d'au moins 15 mètres;

c. une bouée de sauvetage approuvée d'un diamètre extérieur de 610 mm ou de 762 mm reliée à une ligne d'attrape flottante longue d'au moins 15 mètre;

d. un dispositif de rembarquement, lorsque le franc-bord de l'embarcation est supérieur à 0,5 mètre;

e. une ancre munie d'un câble, d'une corde ou d'une chaîne, quelle que soit la combinaison, d'une longueur d'au moins 30 mètres;

f. une écope;

g. une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser par un côté de l'embarcation;

h. Un extincteur de classe 10BC, pour les embarcations munies d'un moteur, et un second extincteur de même classe, pour les embarcations de plaisance dotées d'un appareil de cuisson, de chauffage ou de réfrigération à combustible;

i. Une lampe de poche étanche;

j. Douze fusées éclairantes de type A, B ou C approuvées par les autorités canadiennes. Exempts du transport de dispositifs pyrotechniques de signalisation de détresse, dans les situations suivantes :

(1) les embarcations naviguent sur une rivière, un chenal ou un lac et ne se trouvent jamais à plus d'un mille marin du rivage;

(2) les embarcations participent à une épreuve officielle ou effectuent les derniers préparatifs en vue d'une épreuve officielle et ne comportent pas de matériel de couchage.

k. A sound signalling device or a sound signalling appliance; and

l. Navigation lights that meet the applicable standards set out in the Collision Regulations.

13. In accordance with Small Vessel Regulations, Sailboats over 12 metres in length but not over 20 metres in length shall be equipped with:

a. One DOT / CCG approved PFD or lifejacket of appropriate size for each person on board;

b. One buoyant heaving line of not less than 15 metres in length;

c. One approved lifebuoy with an outside diameter of 610 mm or 762 mm that is equipped with a self-igniting light and is attached to buoyant line of not less than 15 metres in length;

d. A reboarding device;

e. An anchor with not less than 50 metres of cable, rope or chain in any combination;

f. Bilge pumping arrangements;

g. One Class 10BC fire extinguisher at each of the following locations:

(1) At each access to any space where a fuel burning cooking, heating or refrigerating appliance is fitted;

(2) At the entrance to any accommodation space; and

(3) At the entrance to the engine room.

h. 1 axe;

i. 2 buckets, each with a capacity of 10 litres or more;

j. A watertight flashlight;

k. Un avertisseur sonore ou un appareil de signalisation sonore;

l. Des feux de route conformes aux normes applicables établies dans les règlements sur les abordages.

13. Conformément au Règlement sur les petits bâtiments, les voiliers longs de plus de 12 mètres mais de pas plus de 20 mètres doivent comprendre :

a. un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. une ligne d'attrape flottante longue d'au moins 15 mètres;

c. une bouée de sauvetage approuvée d'un diamètre extérieur de 610 mm ou de 762 mm, munie d'un dispositif lumineux automatique et reliée à une ligne d'attrape flottante longue d'au moins 15 mètres;

d. un dispositif de rembarquement;

e. une ancre munie d'un câble, d'une corde ou d'une chaîne, quelle que soit la combinaison, d'une longueur d'au moins 50 mètres;

f. des installations d'épuisement de cale;

g. un extincteur de classe 10BC à chacun des emplacements suivants :

(1) aux accès d'emplacements d'appareils de cuisson, de chauffage ou de réfrigération à combustible;

(2) à l'entrée d'emménagements, s'il y a lieu;

(3) à l'entrée de la salle des machines.

h. une hache;

i. deux seaux d'une capacité d'au moins 10 litres chacun;

j. une lampe de poche étanche;

k. 12 Canadian approved flares of Type A, B, C or D, not more than 6 of which are of Type D;

l. 2 sound signalling appliances (bell and whistle); and

m. Navigation lights that meet the applicable standards set out in the Collision Regulations.

14. A sailboat that is engaged in formal training, in an official competition or in final preparation for an official competition and that is operated under conditions of clear visibility and attended by a safety boat may carry, instead of the equipment prescribed by this Part, the safety equipment that is required under the rules of the competition. (in accordance with Small Vessel Regulations, para 16.3)

WEARING A PERSONAL FLOATATION DEVICE

15. **Sailboats 6 metres or less in length.** PFD's shall be worn by all personnel, while on the water, regardless of water and weather conditions.

16. **Sailboats over 6 metres in length not equipped with cabin accommodation (i.e. whalers and sailing cutters).** PFD's shall be worn by all personnel, while on the water, regardless of water and weather conditions.

17. **Sailboats over 6 metres in length, equipped with cabin accommodation.** PFD's shall be worn by all personnel while the vessel is under way, excepting those below decks. Personnel leaving this cabin area shall put on their PFD before coming on deck or entering the cockpit.

18. These requirements shall not apply to cadets on tall ships (overall length of not less than 15 metres, with an open upper deck and stanchion rails), unless otherwise stated by local orders or ship standing orders.

k. douze fusées éclairantes de type A, B, C ou D, approuvées par les autorités canadiennes, mais un maximum de six de type D;

l. deux appareils de signalisation sonore (cloche et sifflet);

m. des feux de route conformes aux normes applicables établies dans les règlements sur les abordages.

14. Une embarcation à voile qui participe à un entraînement officiel, à une compétition officielle ou aux derniers préparatifs d'une telle compétition, et qui est utilisée par bonne visibilité et accompagnée d'un véhicule de secours peut avoir à bord, au lieu de l'équipement prévu à la présente partie, l'équipement de sécurité prescrit par les règles de la compétition. (selon les règlements sur les petits bâtiments, para 16.3)

PORT DE VÊTEMENTS DE FLOTTAISON INDIVIDUELS

15. **Voiliers longs de six mètres ou moins.** Tous les membres de l'équipage doivent porter des vêtements de flottaison individuels lorsque le bateau est en route, quelles que soient les conditions atmosphériques ou l'état du plan d'eau.

16. **Voiliers longs de plus de six mètres, sans cabine (p. ex., baleinières et cotres à voile).** Tous les membres de l'équipage doivent porter des vêtements de flottaison individuels lorsque le bateau est en route, quelles que soient les conditions atmosphériques ou l'état du plan d'eau.

17. **Voiliers longs de plus de six mètres mais de pas plus de huit mètres et équipés de cabines.** Tous les membres d'équipage doivent porter un vêtement de flottaison individuel quand le bâtiment est en route, sauf les personnes se trouvant dans les cabines. Les personnes qui montent sur le pont doivent d'abord revêtir leurs vêtements de flottaison individuels.

18. Ces exigences ne s'appliquent pas aux cadets sur des grands voiliers (d'une longueur totale d'au moins 15 mètre, avec un pont supérieur ouvert et des jambettes), sauf lorsque les règlements locaux ou les ordres permanents du navire diffèrent.

HELMETS AND FOOTWEAR

19. All cadets participating in on-water sail activities that are qualified at the CYA White Sail II level and below must wear a regionally approved helmet. A kayak type helmet is recommended.

20. Soft-soled shoes shall be worn at all times on any sailing craft. Open-toed shoes (i.e. sandals) are not authorized for wear on any sailing craft.

SAFETY BOATS

21. **Requirements.** Whenever cadets use one or more sailboats 6 metres or less in length, a safety boat shall be crewed and operational. Not more than eight sailboats may be monitored by each safety boat.

22. These ratios should be decreased to account for adverse factors such as:

a. wind velocity;

b. the experience and skill of the crews;

c. the type(s) and size of boats used;

d. the nature, purpose, and duration of the sailing activity;

e. the water and air temperatures;

f. the degree of protection of the sailing area;

g. known local conditions of weather and wave action; and

h. the marine forecast (this should always be checked).

23. **Characteristics.** A safety boat shall be a powerboat, or sailboat equipped with motor, of sufficient size and power for carrying out rescue work in adverse situations. The size and stability of a safety boat shall be appropriate to the waters in which it will be operated and not be over 6 metres in length. It shall also have the following characteristics:

CASQUES ET CHAUSSURES

19. Tout le personnel qualifié voile blanche niveau II ou un niveau inférieur participant à l'entraînement de voile doit porter le casque approuvé par région. Un casque de style « kayak » est recommandé.

20. Des chaussures à semelle molle doivent être portées en tout temps dans les embarcations à voiles. Les chaussures ouvertes (c.-à-d. les sandales) ne sont pas autorisées, quelle que soit l'embarcation.

BATEAUX DE SÉCURITÉ

21. **Exigences.** Chaque fois qu'un ou plusieurs voiliers longs de six mètres ou moins sont utilisés par des cadets, un bateau de sécurité convenable et fonctionnel doit se trouver sur les lieux avec son équipage. Chaque bateau de sécurité ne peut surveiller plus de huit voiliers.

22. Les proportions doivent être réduites pour tenir compte de facteurs défavorables, notamment :

a. la force du vent;

b. l'expérience et les compétences des équipages;

c. le type et la taille des bateaux employés;

d. la nature, l'objectif et la durée de l'activité de voile;

e. la température de l'eau et de l'air;

f. le degré de protection dans la zone de navigation;

g. les conditions atmosphériques et le type de vagues que l'on sait prévaloir localement;

h. les prévisions météorologiques maritimes (elles doivent toujours être vérifiées).

23. **Caractéristiques.** Le bateau de sécurité doit être un bateau à moteur ou un voilier équipé d'un moteur, d'une taille et d'une puissance suffisantes pour mener à bien un sauvetage dans des conditions difficiles. La taille et la stabilité du bateau de sécurité doivent être en rapport avec le plan d'eau où il est utilisé. Il ne doit en aucun cas être d'une longueur supérieure à six mètres. De plus, il doit présenter les caractéristiques suivantes :

a. large enough to carry an operator, an assistant and a minimum of two casualties;

b. sufficient power to move upstream while towing a sailboat; and

c. a reboarding device if the freeboard is greater than 0.5 meters.

24. In addition to the equipment required IAW Small Vessel Regulations (see chapter 2), the following safety equipment shall be carried by all safety boats:

a. one spare rescue assisting device (i.e. a flutter board, rescue torpedo or spare PFD);

b. two foil and plastic rescue blankets (or two wool blankets in waterproof bag);

c. one class C first-aid kit;

d. wirecutters capable of cutting the largest stay wire on the sailing vessel with one hand; (an example is the Felco C7 wire and cable cutters)

e. proper means of communication, in order to contact Base Station on shore;

f. One boat hook; and

g. towline 9m in length.

25. These items shall be listed on a checklist, which shall be checked on each occasion that the safety boat is used.

26. **Safety Boat Operator.** The operator of a safety boat shall be either a certified CYA Sail Instructor or have SCOP Module 1, 3 and 4 certification or an equivalent.

27. **Assistant.** A second responsible person, holding either SCOP Module 1 and 4 certification (or equivalent) OR well trained and evaluated in the operation of powerboats, and appointed by the Water Safety Officer, shall be in the safety boat to assist the operator.

a. taille suffisante pour permettre de transporter un responsable, un adjoint et un minimum de deux blessés;

b. puissance suffisante pour permettre de naviguer en amont tout en remorquant un voilier; et

c. un dispositif de rembarquement, lorsque le franc-bord est supérieur à 0,5 mètre.

24. En plus de l'équipement requis par le Règlement sur les petits bâtiments (voir chapitre 2), l'équipement de sécurité suivant doit être transporté à bord de toute embarcation de sécurité :

a. un dispositif de sauvetage additionnel (ex. une planche, une bouée de sauveteur ou un VFI supplémentaire);

b. deux couvertures de sauvetage en aluminium et matière plastique (ou deux couvertures de laine placées dans un sac étanche);

c. une trousse de premiers soins de classe C;

d. des cisailles permettant de couper d'une main le plus gros câble à bord du voilier (p. ex., un câble Felco C7 et un sectionneur de câble);

e. moyens de communication efficaces permettant de communiquer avec une station de base à terre;

f. une gaffe; et

g. câble de remorquage de 9 m de long.

25. Ces articles doivent être inscrits sur une liste de contrôle, qui doit être vérifiée chaque fois qu'un bateau de sécurité est utilisé.

26. **Responsable de bateau de sécurité.** Le responsable de bateau de sécurité doit posséder un certificat d'instructeur de voile de l'ACY ou détenir les certifications du POEL Modules 1, 3 et 4 ou leur équivalent.

27. **Adjoint.** Une deuxième personne responsable, qui détient une certifications de POEL Modules 1 et 4 (ou l'équivalent) OU qui a reçu une formation et une évaluation adéquates en matière d'utilisation d'embarcations à moteur, nommée par l'officier responsable de la sécurité nautique, doit se trouver dans le bateau de sauvetage afin d'aider le responsable principal.

28. **Unserviceable Safety Boat.** If the safety boat becomes unserviceable, sailboats shall not be permitted to leave the docking area. Should the safety boat become unserviceable while there are boats already sailing, all sailboats shall be recalled and will return as quickly as possible to the docking area.

29. **Action Upon Sighting a Capsized Sailboat.** Immediately upon sighting a capsized sailboat, the safety boat shall proceed at maximum safe speed to the vicinity of the capsized boat. It shall remain there until either:

a. The boat is righted and the safety boat operator is satisfied that the crew is safe to proceed; or

b. The crew is taken on board the safety boat.

30. The decision as to whether or not to take a capsized boat in tow immediately will depend upon circumstances. Bear in mind that the safety of cadets takes precedence over the safety of boats.

31. If medical evacuation of injured cadets by the safety boat is required, the supervision of the remaining sailboats must be considered. An additional safety boat is required or the remaining boats must return to shore/dock.

VISUAL CONTACT

32. The following rules for maintaining visual contact shall apply to the operation of sailboats 6 metres or less in length.

33. **Free Sailing.** When cadets are permitted to use sailboats for “free sailing” (i.e. not in an organized sailing class), it is desirable to set boundaries within which all boats should remain. This facilitates visual contact between sailboats and the safety boat (and where possible, between all boats and the docking/launching area) and permits effective monitoring by the safety boat. These objectives may be met in one of three ways:

28. **Bateau de sécurité hors service.** Les voiliers ne seront pas autorisés à quitter le quai si le bateau de sécurité est hors service. Si le bateau de sécurité tombe en panne alors que les voiliers sont déjà en route, ces derniers devront être rappelés et revenir aussi vite que possible au quai.

29. **Mesure à prendre après avoir repéré un voilier qui a chaviré.** Immédiatement après avoir repéré un voilier de cadets qui a chaviré, le bateau de sauvetage doit se rendre à proximité de l’embarcation en question à la vitesse maximale possible dans les limites de la sécurité. Il doit y demeurer jusqu’à ce que :

a. le voilier ait été redressé et que le responsable du bateau de sécurité soit convaincu que l’équipage ne court plus de risques;

b. l’équipage du voilier qui a chaviré ait été embarqué par le bateau de sécurité.

30. Les circonstances dictent si l’on doit ou non décider de remorquer immédiatement un bateau qui a chaviré. Il ne faut pas oublier que la sécurité des cadets compte plus que la sécurité des bateaux.

31. Au cas où le bateau de sécurité évacuerait des cadets blessés, la surveillance des autres voiliers devra être considérée. Un bateau de sécurité supplémentaire sera donc nécessaire; autrement, les voiliers devront retourner au quai ou à la plage.

CONTACT VISUEL

32. Les règles suivantes pour maintenir le contact visuel doivent s’appliquer à l’utilisation de voiliers longs de six mètres ou moins.

33. **Navigation libre.** Lorsqu’on autorise les cadets à faire de la navigation libre avec les voiliers (c’est-à-dire en dehors d’un cours de voile organisé), il est souhaitable de fixer des limites dans lesquelles devront se maintenir toutes les embarcations. Cette mesure a pour objet de faciliter le contact visuel entre les voiliers et le bateau de sécurité (et, lorsque c’est possible, entre tous les bateaux et la zone d’amarrage et de mise à l’eau) et également de permettre au bateau de sécurité d’exercer une surveillance efficace. À cette fin, on peut procéder de l’une de trois façons différentes :

a. **Designated Point (Preferred Method).** When geographical and other factors permit, a point should be designated on land from which readily visible recall or other signals can be made. This should be as close as practicable to the docking/launching area. Sailing and safety boats shall remain at all times within sight of the designated point.

b. **Defined Sailing Area (Alternative Method).** Where it is not practicable to use the designated point method, a sailing area should be defined, using appropriate landmarks, buoys, or other features. This area should be large enough to permit continuous visual contact between safety boats and sailboats and a reasonable response time by the safety boat in case of capsize. Sailing and safety boats shall remain within the defined sailing area except when proceeding to or from it.

c. **Combined Method.** Where a large body of water is involved, it may be desirable to use a combination of the above methods, limiting the distance that a sailboat may travel while remaining in sight of the designated point.

34. **Sailing Classes.** When cadets are involved in an organized sailing class, except when water temperature falls below 0°C, the rules of paragraph 33 may be waived at the discretion of the Commanding Officer, provided:

a. All sailboats remain in visual and sound-signal contact with the safety boat; and

b. A clearly defined and understood sound / visual signal (i.e. red flag with three whistle blasts) is used to order sailboats to return to the vicinity of the safety boat.

35. **Cruising.** When sailboats are cruising in the company of a safety boat, the following rules shall apply:

a. **Méthode du point désigné (méthode préférée).** Lorsque les facteurs géographiques, entre autres, le permettent, on désigne un point à terre à partir duquel il est possible d'envoyer un signal de rappel ou d'autres signaux. Ce point doit être aussi rapproché que possible de la zone d'amarrage et de mise à l'eau. Les voiliers et les bateaux de sécurité doivent en tout temps demeurer à la vue du point désigné.

b. **Méthode de la zone de navigation définie (autre méthode).** Lorsque la méthode du point désigné n'est pas adaptée aux circonstances, on définit une zone de navigation au moyen de points de repère terrestres, de bouées ou d'autres caractéristiques appropriées. La zone doit être suffisamment grande pour que la pratique de la voile puisse y être agréable mais également définie de telle façon qu'on puisse garder un contact visuel continu entre les bateaux de sécurité et les voiliers ainsi qu'un temps de réaction raisonnable de la part du bateau de sécurité en cas de chavirement. Les voiliers et les bateaux de sécurité doivent demeurer à l'intérieur de la zone de navigation définie sauf lorsqu'ils s'y rendent ou qu'ils en reviennent.

c. **Méthode combinée.** Lorsqu'on navigue sur un grand plan d'eau il peut être souhaitable de combiner les deux méthodes précitées, c'est-à-dire limiter les distances que peut parcourir un voilier tout en le faisant demeurer à la vue d'un point désigné.

34. **Classe de voile.** Lorsque les cadets participent à une classe de voile organisée, sauf lorsque la température est inférieure à 0°C, on peut renoncer à appliquer les règlements du paragraphe 33, à la discrétion du commandant, dans la mesure où :

a. tous les voiliers demeurent en contact visuel et sonore avec le bateau de sécurité;

b. un signal sonore/visuel (ex. drapeau rouge avec 3 coups de sifflet) clairement défini et compris est utilisé pour ordonner à tous les voiliers de revenir à proximité du bateau de sécurité.

35. **Croisière.** Lorsque les voiliers naviguent en compagnie d'un bateau de sécurité, on doit appliquer les règles suivantes :

a. All sailboats shall remain in visual and sound-signal contact with the safety boat;

b. A clearly defined and understood sound/visual signal shall be used to order sailboats to return to the vicinity of the safety boat;

c. All sailboats for which a safety boat is responsible shall remain in reasonably close formation on the same tack. If a boat falls behind, those ahead shall permit it to catch up; and

d. It is recommended that a “guide boat” be designated (usually the slowest sailboat) to which the movements of the other boats should conform.

RECALL

36. When it is desirable to recall sailboats because of weather conditions, time, or other reasons, the method used will be:

a. A red flag (or other clearly understood flag or shape) shall be hoisted at the designated point. Upon seeing the recall signal all sailboats shall immediately return to the docking/launching area. The safety boat shall display a red shape and make sound signals to reinforce the recall signal. If weather or other conditions are such that the boats should be recalled, the safety boat shall take such action without awaiting a signal from the shore.

SIGN IN – SIGN OUT

37. When any sailboat is taken out for the purpose of free sailing, its crew shall sign out and in with the Water Safety Officer. Any damage shall be reported to the Water Safety Officer upon signing in. Signing in and out may be waived for sailing classes where cadets are assigned regularly to specific boats and for racing and regatta situations.

a. tous les voiliers doivent demeurer en contact visuel et sonore avec le bateau de sécurité;

b. un signal sonore/visuel clairement défini et compris doit être utilisé pour ordonner aux voiliers de revenir à proximité du bateau de sécurité;

c. tous les voiliers dont est responsable un bateau de sécurité doivent demeurer raisonnablement près les uns des autres et dans la même direction. Si un voilier perd du terrain, ceux qui se trouvent devant doivent le laisser les rattraper;

d. on recommande de désigner un « bateau guide » (généralement le voilier le plus lent) dont les mouvements devront être suivis par tous les autres bateaux.

RAPPEL

36. Lorsqu’il est souhaitable de rappeler les voiliers à cause des conditions atmosphériques, du temps écoulé ou pour toute autre raison, on devra utiliser la méthode suivante :

a. Un pavillon rouge (ou tout autre pavillon ou marque clairement précisé) sera hissé au point désigné. Après avoir vu le signal de rappel, tous les voiliers devront retourner immédiatement à la zone d’amarrage et de mise à l’eau; pour renforcer le signal de rappel, le bateau de sécurité devra arborer un objet rouge et émettre des signaux sonores. Si les conditions atmosphériques ou autres sont telles que le responsable du bateau de sécurité estime que les voiliers devraient être rappelés, il doit en prendre l’initiative sans attendre qu’un signal soit envoyé de la rive.

SIGNATURE AVANT LE DÉPART – SIGNATURE APRÈS L’ARRIVÉE

37. Quand un équipage prend un voilier pour aller faire de la navigation libre, il doit signer au départ et à l’arrivée le document que lui remet l’officier responsable ou le sous-officier responsable. Tout dommage du bateau doit être indiqué à l’officier responsable des bateaux avant la signature. L’équipage est dispensé de signature pour les classes de voile où les cadets travaillent régulièrement à bord de bateaux précis ou dans le cas de compétitions et de régates.

38. Boats arriving late in the sailing area shall report their presence to the safety boat before proceeding independently. The safety boat operator and/or instructor should be in possession of a boat allocation list prior to leaving the dock.

38. Les bateaux qui arrivent en retard dans la zone de navigation doivent signaler leur présence au bateau de sécurité avant de pouvoir continuer à naviguer indépendamment. L'opérateur et/ou l'instructeur d'embarcation de sécurité devra avoir en sa possession la liste d'attribution de bateaux avant le départ du quai.

WIND AND WEATHER

39. It is not possible to lay down precise rules to govern sailing safety under all conditions and in all locations. In deciding whether to permit sailing, consider the following factors:

a. Wind velocity;

b. The type(s) of boats in use;

c. The experience and skills of the crews;

d. The water and air temperatures;

e. The degree of protection of the sailing area;

f. Known local conditions of weather and wave action; and

g. The marine weather forecast.

40. The guide for the operation of sailboats 6 metres or less in length is found at Annex B. This guide combines the Beaufort Scale and Safe Boating Guide marine weather forecast terminology to determine a safe sailing guide for cadets.

41. **Thunderstorms.** Thunderstorms may produce very dangerous sailing conditions. At the first sign of a thunderstorm, all boats should be recalled. Boats still on the water when a thunderstorm occurs should, when wave action permits, lower sails and keep clear of all rigging.

42. **When in Doubt.** Commanding Officers or the Senior Sail Instructor who are in doubt as to whether or not to permit sailing in windy conditions should use the rule: **when in doubt – don't**.

VENT ET CONDITIONS ATMOSPHÉRIQUES

39. Il n'est pas possible d'indiquer des règles précises pour régir la sécurité en matière de voile dans toutes les conditions et dans tous les endroits. Lorsqu'ils doivent décider d'autoriser ou non la navigation, les officiers responsable des bateaux doivent se fier aux facteurs suivants :

a. la force du vent;

b. les types de bateaux employés;

c. l'expérience et les compétences des équipages;

d. la température de l'eau et de l'air;

e. le degré de protection dans la zone de navigation;

f. les conditions atmosphériques et le type de vagues que l'on sait prévaloir localement;

g. les prévisions météorologiques maritimes.

40. Vous trouverez, à l'Annexe B, le guide relatif à l'utilisation de voiliers longs de six mètres ou moins. Ce guide permet de déterminer les conditions de navigation sans risque pour les cadets, selon l'échelle de Beaufort et la terminologie maritime du Guide de sécurité nautique.

41. **Orages.** Les orages peuvent amener des conditions de navigation très dangereuses. Au premier signe d'un orage, on doit rappeler tous les bateaux. Les équipages des bateaux demeurés sur l'eau au milieu d'un orage devraient, lorsque les vagues le permettent, affaler les voiles et se tenir à l'écart de tout gréement.

42. **En cas de doute.** Les commandants ou le chef instructeur de voile qui ne savent pas s'ils devraient ou non autoriser la navigation lorsqu'il y a beaucoup de vent devraient se souvenir de la règle suivante : **dans le doute – s'abstenir**.

FOG

43. In the event of fog sufficient to interfere with visual contact between sailboats and safety boat, all boats will immediately return to the docking/launching area. The safety boat shall make sound signals to reinforce this order, but the onus shall be on the individual sailboats to return. If wind drops so as to prevent sailing, boats shall be instructed to lower sails and be towed in.

BROUILLARD

43. Lorsque le brouillard est suffisamment épais pour gêner le contact visuel entre les voiliers et le bateau de sécurité, tous les bateaux doivent immédiatement revenir à la zone d'amarrage et de mise à l'eau. Le bateau de sécurité doit émettre des signaux sonores pour renforcer cet ordre, mais on s'attend à ce que les équipages des voiliers prennent d'eux-mêmes la décision de rentrer. Si le vent tombe et qu'il n'est pas possible de rentrer à la voile, on demandera aux équipages d'affaler les voiles et d'attendre d'être remorqués.

TIME LIMITATIONS

44. **General Rule.** Except as permitted under Night Operation, no sailing activities shall be carried out between sunset and sunrise. Boats 6 metres or less in length shall be recalled in time for them to return to the docking/launching area prior to sunset. If wind conditions are so light as to make this impracticable under sail, boats shall be towed in.

LIMITE DE TEMPS

44. **Règle générale.** Sauf dans les cas précisés sous la rubrique des conditions de navigation de nuit, aucune activité nautique ne sera exécutée entre le coucher et le lever du soleil. Les bateaux longs de six mètres ou moins doivent être rappelés suffisamment tôt pour leur permettre de revenir à la zone d'amarrage et de mise à l'eau avant le coucher du soleil. Si le vent est trop faible pour qu'ils puissent revenir à temps à la voile, ils doivent être remorqués.

NIGHT OPERATIONS

45. In general, small-boat activity (and most sailing in larger vessels) should be limited to daylight hours. It is recognized, however, that night sailing may be a valuable experience under the right circumstances, and that, **with proper supervision and equipment**, it presents no greater hazards to a competent sailor than day sailing. The following specify the minimum conditions under which night sailing may be permitted for various sizes of vessel. **These conditions are additional to the equipment requirements of the Small Vessel Regulations.**

NAVIGATION DE NUIT

45. En général, l'utilisation de petites embarcations (et la plupart des activités nautiques dans les bateaux plus importants) doit être limitée aux heures de jour. Il est toutefois admis que la navigation de nuit peut constituer une expérience valable dans les bonnes circonstances et que, **moyennant du matériel et une supervision adéquate**, elle ne présente pas plus de danger que la navigation de jour pour un marin compétent. On trouve indiqué ci-dessous les conditions minimales dans lesquelles la navigation de nuit est autorisée pour diverses tailles de bateaux. **Ces conditions viennent s'ajouter aux exigences en matière d'équipement indiquées dans le Règlement sur les petits bâtiments.**

46. **Sailboats 6 metres or less in length:**

a. Sailboats and safety boat(s) shall be equipped with operating navigation lights as required under the Collision Regulations;

b. Safety boat(s) shall be equipped with an operating sealed-beam spotlight, mounted or hand-held, plus six hand-held night flares;

46. **Voiliers longs de six mètres ou moins :**

a. Les voiliers et les bateaux de sécurité doivent être équipés de feux de route en état de marche comme l'exigent les règlements sur les abordages;

b. Les bateaux de sécurité doivent être équipés d'un projecteur scellé en état de marche, soit monté soit tenu à la main, ainsi que de six feux à main de nuit.

c. Sailboats shall each be equipped with an operating flashlight;

d. All personnel in sailboats and safety boat(s) shall wear PFDs and be equipped with an operational high-brilliance rescue strobe light, (NSN 6230-21-067-5209);

e. The safety boat shall be under the control of a member of the Canadian Forces; and

f. Prior approval by the Commanding Officer of the Regional Cadet Support Unit must be received. Such approval shall require detailed information as to times, destination, route, and supervisory personnel.

47. **Sailboats over 6 m but under 8 m in length:**

a. Sailboats shall be equipped with operating navigation lights as required under the Collision Regulations;

b. Sailboats shall be equipped with an operating sealed-beam spotlight (mounted or hand-held);

c. All personnel shall wear PFDs equipped with approved strobe lights;

d. The vessel shall either:

(1) Have on board an experienced Officer or Civilian Instructor, or

(2) Be accompanied by a powerboat having on board a member of the Canadian Forces.

e. Personnel working or required to be on deck, other than in the cockpit, shall use lifelines;

f. When not accompanied by a powerboat, vessels shall have auxiliary power, either inboard or outboard; and

c. Les voiliers doivent être équipés d'une lampe de poche en état de marche.

d. Tous les membres de l'équipage des voiliers et des bateaux de sécurité doivent porter un VFI de cadets et être équipés d'une lampe stroboscope (NNO 6230-21-067-5209) de sauvetage à haute intensité en état de marche.

e. Le bateau de sécurité doit être placé sous la supervision d'un officier ou d'un instructeur civil.

f. La navigation de nuit doit avoir été préalablement approuvée par le commandant d'unité régionale de soutien des cadets. Ce type d'approbation est sujette à la réception de renseignements détaillés sur les horaires, la destination, la route et le personnel de surveillance.

47. **Voiliers longs de plus de six mètres mais de pas plus de huit mètres :**

a. les voiliers doivent être équipés de feux de route en état de marche tel que l'exigent les règlements sur les abordages;

b. les voiliers doivent être équipés d'un projecteur scellé en état de marche (monté ou à main).

c. Tout le personnel doit porter un VFI équipé de lampes stroboscopes de sauvetage approuvées.

d. L'embarcation doit :

(1) avoir à bord un officier ou un instructeur civil; ou

(2) être accompagnée d'un bateau à moteur ayant à bord un officier ou un instructeur civil.

e. Les membres d'équipage travaillant sur le pont ou dont la présence y est requise, autres que ceux qui se trouvent dans le cockpit, doivent utiliser les lignes de sauvetage.

f. S'il n'est pas accompagné d'une embarcation à moteur, le bâtiment doit être équipé d'un moteur auxiliaire soit intérieur, soit hors-bord.

g. Prior approval of the Commanding Officer of the Regional Cadet Support Unit must be received.

48. **Sailboats over 8 metres in length.** All conditions for equipment requirements shall be the same as for sailboats between 6 metres and 8 metres, with the exception that the requirements in subparagraph f. for auxiliary power may be waived. (This classification will include whalers and sailing cutters).

49. **General Precautions for Night Sailing.** In addition to the above, the following general precautions apply to all night sailing:

a. Where several vessels are sailing in company, special care must be taken that they do not become separated;

b. Greater than usual care must be taken with navigation;

c. A careful lookout must be maintained to avoid collisions;

d. A careful assessment of weather, (present and forecast) is required. Weather that could be quite safe for day sailing may be dangerous at night;

e. In tidal areas, a knowledge of local tides and tidal currents is essential to navigation in darkness;

f. When possible, means should be found for informing the home base of arrival at the destination so that a search may be instituted in the event of non-arrival by a specified time;

g. Where radio communication is available and practicable, it should be used;

h. A sail plan must be filed with the Water Training Safety Officer prior to departure.

g. La sortie doit avoir été préalablement approuvée par le commandant d'unité régionale de soutien des cadets.

48. **Voiliers longs de plus de huit mètres.** Les exigences en matière d'équipement sont les mêmes que pour les voiliers dont la longueur est comprise entre six mètres et huit mètres, sauf que l'on peut renoncer à l'exigence de l'alinéa f, en ce qui concerne le moteur auxiliaire. (Cette classification inclut les baleinières et les cotres à voile.)

49. **Précautions générales pour la navigation de nuit.** Outre ce qui précède, les précautions générales suivantes s'appliquent à toute navigation de nuit :

a. Lorsque plusieurs bâtiments naviguent de concert, on doit faire particulièrement attention à ce qu'ils ne se séparent pas.

b. On doit soigner particulièrement la navigation.

c. On doit exercer une surveillance vigilante pour éviter les abordages.

d. Il est nécessaire de procéder à une évaluation sérieuse des conditions atmosphériques présentes et prévues. Des conditions relativement sûres pour la navigation de jour peuvent se révéler dangereuses la nuit.

e. Dans les zones de marée, une connaissance des courants locaux et des courants de marée est essentielle à la navigation dans l'obscurité.

f. Quand c'est possible, on doit trouver des moyens d'informer la base de l'arrivée à destination des bateaux de façon que des recherches puissent être entamées au cas où ils n'arriveraient pas à l'heure prévue.

g. Lorsque les communications radio sont disponibles et utilisables, on doit s'en servir.

h. Un plan de navigation doit être soumis aux officiers responsables des embarcations avant le départ

CAPSIZE DRILL

50. With modern boats and proper training, capsizing has come to be regarded as a normal, acceptable, and rather minor hazard of small-boat sailing except in very cold water. The competent sailor wears appropriate clothing for the conditions and knows how to get his boat righted, free of water, and sailing again with a minimum period of immersion. Cadets involved in small-boat sailing should, as early as possible in their training, be given thorough instruction and practice in correct capsize procedure. No cadet will be permitted free sailing privileges until this training is completed.

EXERCICE DE CHAVIREMENT

50. Des bateaux modernes et une formation adéquate font que le chavirement est maintenant considéré comme normal, acceptable et plutôt bénin pour la navigation à voile dans de petites embarcations, sauf dans des eaux très froides. Un marin compétent porte des vêtements adaptés aux conditions et sait comment redresser son bateau, le vider de son eau et repartir après une immersion d'une durée minimale. Les cadets qui naviguent dans de petites embarcations devraient, dès que possible au cours de leur formation, recevoir des instructions détaillées sur ce qu'il faut faire à la suite d'un chavirement et avoir la possibilité de mettre cet enseignement en pratique. Aucun cadet ne devrait être autorisé à pratiquer la navigation libre tant qu'il n'a pas reçu cette formation.

CHAPTER 5

CANOE AND KAYAK SAFETY ORDERS

GENERAL

1. These orders shall apply to all canoeing and kayaking activities within the Canadian Cadet Movement.

2. The aim of canoe and kayak training is to expose Cadets, Officers, and Civilian Instructors to an activity of great cultural significance to Canadians. The Canadian Cadet Movement offers an exciting way for cadets to explore our waterways through the promotion of safe canoeing and kayaking and environmentally sensitive paddling.

3. The objectives of the canoe and kayak training program are:

a. To encourage outdoor physical activity;

b. To be self-sufficient through training of instructors from within the Canadian Cadet Movement; and

c. To enable personnel to safely navigate the rivers, lakes and coastal waters of this country.

AUTHORITY

4. The Director of Cadets is responsible for establishing policy. The Commanding Officers of Regional Cadet Support Units are responsible for appointing canoeing and kayaking instructors and approving canoeing and kayaking activities.

REGIONAL STANDING ORDERS AND STANDARD OPERATING PROCEDURES (SOSOPs)

5. The Water Training SOSOPs established for canoe and kayak activities shall include:

a. Action to be taken in the event of an emergency, including the method of contacting medical, fire and police agencies;

b. Reports, including Accident and Near Accident Reports, River Logs, and Instructor Logs;

CHAPITRE 5

ORDONNANCES DE SÉCURITÉ POUR LES CANOTS ET KAYAKS

GÉNÉRALITÉS

1. Ces ordonnances doivent s'appliquer à tous les canots et kayaks utilisés au sein du Mouvement des cadets du Canada.

2. La formation relative au canot et kayak vise à faire connaître aux cadets, aux officiers et aux instructeurs civils une activité d'une grande valeur culturelle pour les Canadiens. Le Mouvement des cadets du Canada permet à ses membres d'explorer les voies navigables canadiennes d'une manière passionnante, en favorisant la pratique sans danger du canot et du kayak en harmonie avec la nature.

3. Le programme de formation en matière de canot et de kayak vise les objectifs suivants :

a. Encourager l'activité physique en plein air;

b. Favoriser l'autonomie grâce à la formation offerte par des instructeurs provenant du Mouvement des cadets du Canada;

c. Permettre aux membres des effectifs de naviguer en toute sécurité sur les rivières et les lacs du Canada.

RESPONSABILITÉ

4. Le directeur des cadets est responsable de l'établissement de la politique. Les commandants d'unités régionales de soutien des cadets sont responsables de la nomination d'instructeurs de canot ou de kayak et de l'approbation d'activités de canotage ou de kayak.

ORDRES PERMANENTS ET INSTRUCTIONS PERMANENTES D'OPÉRATION (OPIPO)

5. Les OPIPO régionaux relatifs aux activités de canot ou kayak doivent comprendre les éléments suivants :

a. Mesures à prendre en cas d'urgence, notamment pour communiquer avec les services médicaux, de police et d'incendies;

b. Rapports, y compris les rapports d'accidents et d'accidents frôlés, les registres des rivières et les registres d'instructeurs;

c. Systems of control, including warning signals, whistles, alarms and search and rescue methods and procedures;

d. User prerequisites, including requirements in swimming ability and age limitations;

e. Specific prohibitions, including details on reserved or restricted areas;

f. Control of the number of persons using the canoes or kayaks at any one given time;

g. Physical security arrangements, including hours of operation;

h. Management procedures, including delegated authorities;

i. Mandatory types of canoeing or kayaking apparel;

j. Instructions regarding special and common hazards; and

k. Terms of reference for each management, supervisory, maintenance and custodial position, including the individual responsibilities for emergency and security procedures.

DEFINITIONS

6. For the purposes of this order:

a. The term “canoe” and the term “kayak” shall refer to a light open boat propelled by paddle(s);

b. The term “canoe training” or “kayak training” shall refer to training limited to single location from which the class usually moves no more than 30 minutes or 1000 metres from the put-in point;

c. The term “canoe tripping” or “kayak tripping” is any canoe or kayak activity that moves more than 30 minutes or 1000 metres from the put-in point;

c. Systèmes de contrôle, y compris les signaux d’alarme, les sifflets, les alarmes et les méthodes et procédures de recherche et sauvetage;

d. Conditions préalables visant les utilisateurs et les limites d’âge;

e. Interdictions précises, y compris des renseignements détaillés relatifs aux zones réservées ou réglementées;

f. Contrôle ponctuel du nombre d’utilisateurs de canots ou de kayaks;

g. Dispositions relatives à la sécurité physique, y compris les heures d’activité;

h. Procédures de gestion, y compris les pouvoirs délégués;

i. Types d’agrès obligatoires à bord de canots ou kayaks;

j. Directives relatives à des dangers particuliers et courants;

k. Attributions propres à chaque poste de direction, de supervision, d’entretien et de garde, y compris les responsabilités relatives aux procédures d’urgence et de sécurité.

DÉFINITIONS

6. Dans le cadre des présentes ordonnances :

a. Le terme « canot » et le terme « kayak » désigne une embarcation légère non pontée propulsée à l’aide de pagaies;

b. Le terme « formation en matière de canot » ou « formation en matière de kayak » s’applique à de la formation restreinte à un seul emplacement, d’où la classe s’éloigne généralement pendant un maximum de 30 minutes ou de 1 000 mètres du point de mise à l’eau;

c. Le terme « excursion en canot » ou « excursion en kayak » signifie les activités de canot ou de kayak dans le cadre desquelles on s’éloigne pendant plus de 30 minutes ou de plus de 1 000 mètres du point de mise à l’eau;

d. The term “flatwater” describes paddling conditions in calm, relatively flat water with no noticeable current;

e. The term “lakewater” describes similar paddling conditions as flatwater. Typically, lakewater paddling refers to the highly advanced performance of flatwater paddling maneuvers to an aesthetic standard;

f. The term “moving water” refers to any water that has a discernible current typically assessed with the International Scale of River Difficulty (Class 1 to 6). The term “white water” is sometimes used in reference to violent moving water. As a generic term, moving water encompasses white water;

g. The term “Ocean, coastal and open water” refers to paddling conditions in very large bodies of water that would behave like an ocean, ex: seas, very large bays and very large lakes;

h. The term “wilderness paddling” or “wilderness trips” describes paddling in a remote, wilderness setting with limited road/rail access, limited communications, difficult evacuation procedures and/or environmentally sensitive areas; and

i. The term “reasonable visibility” is a paddling condition measured by the ability for each paddler to see the entire group, the lead craft must also be able to see the equivalent distance ahead.

POLICY

7. The Commanding Officer of a Regional Cadet Support Unit retains the responsibility to approve or decline canoe or kayak activity requests. This includes an acceptance or review of the water classification of the intended training area or route.

d. Le terme « eaux calmes » décrit les conditions de canotage en eaux relativement calmes, sans courant perceptible;

e. Le terme « eaux lacustres » décrit les conditions de canotage similaires à celles que l’on retrouve en eaux calmes. Généralement, cette expression est réservée à l’exécution des manœuvres à un niveau technique élevé correspondant à une norme esthétique;

f. Le terme « eaux en mouvement » désigne tout plan d’eau ayant un courant perceptible généralement évalué selon l’échelle internationale de difficulté des rivières (cotes 1 à 6). Le terme « eaux vives » est parfois utilisé pour désigner les courants violents. En tant que générique, « eaux en mouvements » englobe « eaux vives »;

g. Les termes « océan », « eaux côtières » et « eaux libres » décrivent les conditions de canotage sur de très grands plans d’eau dont le comportement s’apparente à celui d’un océan, comme par exemple, des mers, de très grandes baies ou de très grands lacs;

h. Le terme « canotage en milieu sauvage » ou « excursion en milieu sauvage » décrit la pratique du canotage dans des régions éloignées et sauvages, difficilement accessibles par train ou par route, avec des moyens de communication limités, des procédures d’évacuation difficiles et/ou des secteurs vulnérables sur le plan écologique; et

i. Le terme « visibilité raisonnable » décrit une condition de canotage dans laquelle chaque pagayeur est capable de voir l’ensemble du groupe, l’embarcation de tête ayant une visibilité équivalente vers l’avant.

POLITIQUE

7. Les commandants d’unités régionales de soutien des cadets conservent la responsabilité de l’approbation ou du refus des demandes touchant des activités de canot ou de kayak, y compris l’approbation ou l’examen de la classification des eaux de la zone d’instruction ou du parcours prévu.

8. Instructors must be suitably qualified and experienced CF members, Civilian Instructors, or Civilian professionals. A qualified instructor must directly supervise all canoe or kayak training.

9. Recreational flatwater canoeing activities shall be supervised by a safety boat, operated by a certified canoe instructor **OR** an experienced canoeist qualified to operate the type of safety boat used. The ratio of safety boats to canoes shall not exceed 1: 6.

10. Cadets and Staff Cadets may be employed as Assistant Canoe or Kayak Instructors under the direct supervision of a qualified instructor.

11. There must be a safety boat for all training and tripping activities that take place more than 250 m from the put-in point. Safety boats are preferably power boats as described in this order but similar size crafts with similar capability can also be used as safety boats for canoeing and kayaking activities.

INSTRUCTOR QUALIFICATION AND LEVEL OF EXPERIENCE

12. In the approval process it is important to recognise that instructors require training qualifications and experience in order to conduct safe canoe or kayak activities.

13. **Qualifications:**

a. The CO of an RCSU may appoint a person as a canoe or kayak instructor who has successfully passed a Canoe or Kayak Instructor Qualification Course offered by the Regional Cadet Instructor School (RCIS), which include:

(1) Basic Canoe Instructor;

(2) Canoe Trip Leader;

(3) Flatwater Canoe Instructor; and

(4) Moving Water Canoe Instructor.

8. La formation doit être donnée par des membres des FC, des instructeurs civils ou des professionnels civils possédant une expérience et des compétences adéquates. Toute formation en canot ou en kayak doit se dérouler sous la surveillance directe d'un instructeur qualifié.

9. Les activités récréatives de canotage en eau calme seront supervisées par une embarcation de sauvetage sous la gouverne d'un instructeur certifié en canotage **OU** un canotier expérimenté qualifié pour exploiter le type d'embarcation de sauvetage utilisée. Le rapport entre les embarcations de sauvetage et les canots ne devra pas excéder 1: 6.

10. Les cadets et les cadets-cadres peuvent agir à titre d'instructeurs adjoints de canot ou de kayak, sous la surveillance directe d'un instructeur qualifié.

11. Une embarcation de sécurité est requise pour toute activité de canot ou de kayak qui prend place à plus de 250 mètres du point de départ. Les embarcations de sécurité suggérées sont des embarcations à moteur, mais une embarcation de grandeur et avec des capacités similaires peut être utilisée comme embarcation de sécurité lors d'activités de canot ou de kayak.

QUALIFICATIONS ET EXPÉRIENCE DES INSTRUCTEURS

12. Dans le cadre du processus d'approbation, il importe de reconnaître que les instructeurs doivent avoir suivi de la formation et acquis de l'expérience et des qualifications, afin d'être en mesure de mener des activités de canot ou de kayak sans danger.

13. **Qualifications :**

a. Les commandants d'URSC peuvent nommer, à titre d'instructeurs de canot, des personnes qui ont suivi avec succès un cours d'accréditation d'instructeurs de canot ou de kayak offert par l'École régionale d'instructeurs de cadets (ERIC) incluant :

(1) Instructeur de canot de base;

(2) Chef d'expédition de canot;

(3) Instructeur de canot en eau calme; et

(4) Instructeur de canot en eau vive.

b. The CO of an RCSU may appoint a person as a canoe or kayak instructor who has successfully passed a Canoe or Kayak Instructor Qualification Course offered by the Canadian Recreational Canoe Association (CRCA) or one of its affiliated associations; and

c. The CO of an RCSU may appoint a person as a canoe or kayak instructor who has successfully passed a Canoe or Kayak Instructor Qualification Course offered by a recognised canoe outfitter or training company after a review of skills;

d. At least one instructor present at the training session or the trip must hold an Emergency First Aid qualification.

14. **Experience:**

a. The qualifications at paragraph 13 represent sufficient experience for flatwater training and tripping;

b. Recent experience relative to the training to be conducted, and in similar water conditions is required for at least one instructor conducting the moving water training and tripping;

c. Moving water trip leaders must have prior experience as at least an assistant trip leader under an experienced trip leader prior to becoming the commander of a moving water expedition or a canoe/kayak trip.

EQUIPMENT

15. As per Small Vessel Regulations, each canoe or kayak must be equipped with the following safety equipment:

a. One DOT / CCG approved PFD or Lifejacket of appropriate size for each person on board;

b. Les commandants d'URSC peuvent nommer, à titre d'instructeurs de canot ou de kayak, des personnes qui ont suivi avec succès un cours d'accréditation d'instructeurs de canot ou kayak offert par l'Association canadienne du canotage récréatif (ACCR) ou l'une de ses associations affiliées;

c. Les commandants d'URSC peuvent nommer, à titre d'instructeurs de canot ou de kayak, des personnes qui ont suivi avec succès un cours d'accréditation d'instructeurs de canot/kayak offert par une compagnie d'instruction ou un pourvoyeur reconnu en matière de canot, après l'examen de leurs compétences;

d. Au moins un des instructeurs présents lors d'activités ou d'excursions sur l'eau doit posséder un certificat de Secourisme d'Urgence.

14. **Expérience :**

a. Les qualifications mentionnées au paragraphe 13 sont suffisantes pour les activités ou excursions en eaux calmes;

b. Pour les activités et excursions en eau vive, il est obligatoire qu'au moins un des instructeurs ait une expérience récente en instruction dans des conditions similaires.

c. Les responsables d'excursions en eau vive doivent avoir acquis une expérience préalable en tant qu'assistant à un responsable expérimenté d'une excursion avant de prendre charge de toute excursion de canot ou de kayak en eau vive.

ÉQUIPEMENT

15. Conformément au Règlement sur les petits bâtiments, tous les canots et kayaks doivent être munis de l'équipement de sécurité suivant :

a. un vêtement de flottaison individuel ou un gilet de sauvetage de taille appropriée, approuvé par le Ministère des Transports et la Garde Côtière Canadienne, pour chaque personne à bord;

b. One buoyant heaving line of not less than 15 metres in length;

c. One manual propelling device or an anchor with not less than 15 metres of cable, rope or chain in any combination;

d. One bailer or one manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

e. A sound signalling device or a sound signalling appliance; and

f. Navigation lights that meet the applicable standards set out in the Collision Regulations if the pleasure craft is operated after sunset and before sunrise or in periods of restricted visibility.

16. In addition, kayaks shall also be equipped with:

a. Floatation bags (or watertight compartments) and spray skirt. Wetsuit or drysuits are recommended when water temperature is below 10° C.

17. In addition, canoes shall also be equipped with:

a. A spare paddle secured but immediately available in emergency (i.e. losing or breaking a paddle in rapids); and

b. Painters (6 metres end lines, bow and stern, 10 mm floatable polypropylene rope), with no knots, etc, at the free end which could snag.

INSTRUCTOR TO STUDENT RATIO

18. The following instructor to student ratios for canoe and kayak activities have been adopted from the training programs of the CRCA. In some cases the ratio has been adapted to account for the normal training environment under which these activities will take place within the CCO.

b. Une ligne d'attrape flottante longue d'au moins 15 mètres;

c. Un dispositif de propulsion manuel (pagaie ou rame) ou une ancre munie d'un câble, d'une corde ou d'une chaîne, quel que soit l'agencement, d'une longueur d'au moins 15 mètres;

d. Une écope ou une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser par un côté de l'embarcation;

e. Un avertisseur sonore ou un appareil de signalisation sonore;

f. Des feux de route conformes aux normes applicables établies dans les règlements sur les abordages, pour les embarcations de plaisance utilisées entre le coucher du soleil et le lever du jour ou en période de visibilité réduite.

16. Les kayaks doivent également être munis des éléments suivants :

a. Flotteurs et jupette. Des vêtements isothermiques (wetsuits ou drysuits) sont recommandés lorsque la température est plus basse que 10 degrés Celcius.

17. Les canots doivent également être munis des éléments suivants :

a. Une pagaie de secours arrimée mais immédiatement disponible en cas d'urgence (c'est-à-dire en cas de perte ou de bris d'une pagaie dans les rapides);

b. Des amarres (lignes à l'avant et à l'arrière, longues de six mètres et ayant 10 millimètres de diamètre, en polypropylène flottant), sans nœud, etc., à l'extrémité qui pourrait se coincer;

RAPPORT INSTRUCTEUR-ÉTUDIANTS

18. Les rapports instructeur-étudiant suivants pour les activités en canot et en kayak proviennent des programmes de formation de l'ACCR. Dans certains cas le rapport a été adapté afin de respecter le milieu de formation habituel où ces activités se dérouleront au sein de l'OCC.

19. The instructor to student ratio for canoeing shall be as follows:

a. Flatwater/Lakewater (Tandem) – 1:12 (max 6 canoes);

b. Flatwater/Lakewater (Solo) – 1:6;

c. Class I and II Moving water (Tandem) – 1:10 (max 5 canoes);

d. Class I and II Moving water (Solo) – 1:5; and

e. Class III and IV Moving water (Tandem) – 1:6 (max 3 canoes);

f. Class III and IV Moving water (Solo) – 1:3;

g. Day or Overnight tripping shall maintain an instructor to student ratio appropriate to type of canoeing to take place IAW subparagraphs a through f; and

h. Extended tripping that takes place in remote regions, isolated from well populated areas and more than twelve hours from support services, shall maintain a ratio of 1:8 (max 4 canoes) for tandem and 1:4 for solo; and

i. For all tripping, one instructor in the group shall be a qualified trip leader.

20. The instructor to student ratio for kayaking shall be as follows:

a. Flatwater instruction (river or sea kayak) – 1:6;

b. Sea Kayaking (Tandem) on sheltered coastline (calm seas and wind less than 10 knots) – 1:12 (max 6 kayaks);

c. Sea Kayaking (Solo) on sheltered coastline (calm seas and wind less than 10 knots) – 1:6;

d. Sea Kayaking (Tandem) on exposed coastline (slight sea state and winds of 10–15 knots) – 1:8 (max 4 kayaks);

19. Le rapport entre l'instructeur et les étudiants pour canot s'établit comme suit :

a. Eaux calmes/lacustres (Duo) – 1:12 (max. 6 canots);

b. Eaux calmes/lacustres (Solo) – 1:6;

c. Eaux en mouvement des cotes I et II (Duo) – 1:10 (max. 5 canots);

d. Eaux en mouvement des cotes I et II (Solo) – 1:5;

e. Eaux en mouvement des cotes III et IV (Duo) – 1:6 (max. 3 canots);

f. Eaux en mouvement des cotes III et IV (Solo) – 1:3;

g. Les excursions/expéditions d'une ou plusieurs journées doivent maintenir le rapport instructeur-étudiant approprié selon les sous-paragraphes a à f;

h. Les excursions/expéditions prolongées qui se tiennent en région éloignée, isolées des secteurs à forte densité de population et à plus de douze heures des services de soutien devront maintenir un rapport de 1:8 (max. 4 canots) en duo et de 1:4 en solo; et

i. Pour toutes les excursions/expéditions, un instructeur parmi le groupe doit-être un chef d'excursion qualifié.

20. Le rapport entre l'instructeur et les étudiants pour kayak s'établit comme suit :

a. Instruction en eaux calmes (kayaks de rivières ou de mer) – 1:6;

b. Kayak de mer (Duo) en eaux côtières abritées (état de mer calme et vents de moins de 10 nœuds) – 1:12 (max. 6 kayaks);

c. Kayak de mer (Solo) en eaux côtières abritées (état de mer calme et vents de moins de 10 nœuds) – 1:6

d. Kayak de mer (Duo) en eaux côtières à découvert (état de mer léger et vents de 10 à 15 nœuds) – 1:8 (max. 4 kayaks);

e. Sea Kayaking (Solo) on exposed coastline (slight sea state and winds of 10-15 knots) – 1:4;

f. River Kayaking (Class I & II moving water) – 1:6

g. River Kayaking (Class III & IV moving water) – 1:4;

h. Day or Overnight tripping shall maintain an instructor to student ratio appropriate to type of kayaking to take place IAW subparagraphs a through g;

i. Extended tripping that takes place in remote regions, isolated from well populated areas and more than twelve hours from support services, shall maintain a ratio of 1:8 (max 4 kayaks) for tandem sea kayaking and 1:4 for solo sea and river kayaking; and

j. For all tripping, one instructor in the group shall be a qualified trip leader

MINIMUM NUMBER OF PADDLERS AND CANOE/KAYAK

21. Since safety and rescues are often accomplished with teamwork, there must be a minimum number of canoes or kayaks on the water to ensure the safety of all paddlers.

22. During a training sessions, there must be at least 2 crafts on the water at all times. If solo paddlers are operating the crafts, then there must be at least 3; and

23. For tripping, there must be a minimum of 3 crafts in a group.

WORK TO REST RATIO

24. It is difficult to prescribe reasonable distances expected to be travelled in one day. Winds, river velocity, paddlers experience and confidence will play an important role in deciding what is a reasonable distance to be covered in one day. Usually paddling with cadets on flatwater, a small

e. Kayak de mer (Solo) en eaux côtières à découvert (état de mer léger et vents de 10 à 15 nœuds) – 1:4;

f. Kayak de rivière (Eaux en mouvement des cotes I et II) – 1:6;

g. Kayak de rivière (Eaux en mouvement des cotes III et IV) – 1:4;

h. Les excursions/expéditions d'une ou plusieurs journées doivent maintenir le rapport instructeur-étudiant approprié selon les sous-paragraphes a à g;

i. Les excursions/expéditions prolongées qui se tiennent en région éloignée, isolées des secteurs à forte densité de population et à plus de douze heures des services de soutien devront maintenir un rapport de 1:8 (max. 4 kayaks) pour le kayak de mer en duo et de 1:4 pour le kayak de mer ou de rivière en solo; et

j. Pour toutes les excursions/expéditions, un instructeur parmi le groupe doit-être un chef d'excursion qualifié.

NOMBRE MINIMAL DE PAGAYEURS ET DE CANOTS/KAYAKS

21. Pour une raison de sécurité et pour faciliter les sauvetages, s'il y a lieu, un nombre minimum de canots ou de kayaks doivent être sur l'eau. Ceci permettra d'assurer la sécurité de tous.

22. Pendant une session d'instruction, il doit y avoir au moins 2 embarcations sur le plan d'eau en tout temps. Si les embarcations ne contiennent chacune qu'une personne, trois embarcations sont requises avant de pouvoir dispenser la période d'instruction.

23. Pour les excursions, un groupe minimum de 3 canots ou kayaks est requis.

RAPPORT TRAVAIL-REPOS

24. Il est difficile d'estimer les distances parcourues en excursion durant une journée. Les vents, la vitesse du débit de la rivière, l'expérience des cadets et leur confiance en eux auront un impact important sur la décision concernant la distance raisonnable à parcourir en une journée.

group can expect to travel at 3 Km/h. However, Trip planners must allow for a 1:1 work to rest ratio for every 24 hour period, therefore, a maximum of 12 hours of paddling in one day. If situations arise that require a group to paddle for more than 12 hours in one day, then the trip planners must offset this during the other days of the trip.

Habituellement, lorsqu'on fait une excursion en eaux calmes, un petit groupe peut espérer avancer à une vitesse d'environ 3 km/h. Toutefois, les responsables doivent s'assurer de respecter le ratio de travail-repos 1 :1 pour chaque période de 24 h; c'est à dire, un maximum de 12 h d'efforts par jour. Si une situation imprévue oblige un groupe à pagayer pendant plus de 12 h en une journée, le responsable doit s'assurer de reprendre le temps de repos lors des jours suivants.

SAFETY BOATS

25. There will be a designated safety boat for every canoe trip, and when training takes place more than 250 m from the put-in point of the training activity.

26. The safety boat shall be, as a minimum, the same type of craft and of similar capability as the crafts the cadets are using (i.e. a canoe). Since kayaks are usually smaller than canoes, a kayak cannot be used as a safety boat for canoe training. A canoe can be used as a safety boat for kayak training if it is at least as capable as the kayaks being used by the group. If the kayak training requires rolling capability, then if a canoe is being used as a safety boat, the operator must also have rolling capability.

27. There must be a safety boat for all training and tripping activities that take place more than 250 m from the put-in point. Safety boats are preferably power boats as described in this order but similar size crafts with similar capability can also be used as safety boats for canoeing and kayaking activities.

28. At least one operator of the safety boat is an instructor qualified to the highest level of difficulty expected during the training session or the trip.

29. When a canoe or kayak is used as a safety boat for a trip, the trip leader in the canoe cannot be the only safety boat and instructor in the group. If a canoe or kayak is being used as a safety boat, then there must be at least one other instructor on the water.

EMBARCATIONS DE SÉCURITÉ

25. Une embarcation de sécurité doit être utilisée pour toute excursion en canot ou en kayak se déroulant à plus de 250 m du point de départ de l'activité.

26. Une embarcation de grandeur et avec des capacités similaires à l'embarcation utilisée par les cadets (i.e. un canot ou kayak) peut être utilisée comme embarcation de sécurité lors d'activités de canot ou de kayak. Comme les kayaks sont généralement plus petits que les canots, un kayak ne peut pas être utilisé comme embarcation de sécurité pour une activité de canots, mais le contraire est possible. Si les activités en kayak requièrent des capacités de revirement et qu'un canot est utilisé comme embarcation de sécurité, le canot doit avoir les mêmes capacités de revirement.

27. Une embarcation de sécurité est requise pour toute activité de canot ou de kayak qui prend place à plus de 250 mètres du point de départ. Les embarcations de sécurité suggérées sont des embarcations à moteur, mais une embarcation de grandeur et avec des capacités similaires peut être utilisée comme embarcation de sécurité lors d'activités de canot ou de kayak.

28. Au moins un opérateur de l'embarcation de sécurité doit être qualifié au plus haut niveau de difficulté exigé durant la session d'instruction ou l'excursion.

29. Si un canot ou un kayak est utilisé comme embarcation de sécurité, le responsable de l'excursion dans un canot/kayak ne peut pas être le seul instructeur ou embarcation de sécurité sur le plan d'eau. Si un canot/kayak est utilisé comme embarcation de sécurité, un autre instructeur doit être présent en tout temps sur le plan d'eau.

30. On big river, coastal waterways or open water, a power safety boat is recommended. If powerboats cannot be used (e.g. on rivers with shallow rapids or long portages, nature preserves or provincial/ national heritages sites where powerboats are not permitted), then 2 crafts of the same size and capability as the crafts being used on the trip must be designated as safety boats.

31. The safety boat/canoe ratio shall be as follows:

a. One safety boat for every 6 canoes;

b. The number of safety boats to canoes should be increased in adverse water conditions;

c. The power safety boat operator must have Modules 1, 3 and 4 of the Small Craft Operator Program certification if the safety boat is under power.

CHARACTERISTICS OF A POWER SAFETY BOAT

32. A safety boat, if a powerboat must be of sufficient size and power for carrying out rescue work. The size and stability of a safety boat shall be appropriate to the waters in which it will be operated and not be over 6 metres in length. It should also have the following characteristics:

a. Large enough to carry an operator, an assistant and casualties;

b. Sufficient power to move upstream;

c. Rope hand holds on exterior gunwales.

SAFETY BOAT EQUIPMENT

33. Each safety boat, **under power or paddle**, shall be equipped with the following items:

a. One PFD per person;

30. Lorsqu'on navigue sur des grands plans d'eau et en mer, l'utilisation d'une embarcation à moteur comme embarcation de sécurité est recommandée. Si une embarcation à moteur ne peut être utilisé (ex. s'il y a trop de rapides, une longue période de portage requise, sites protégés, etc.), alors 2 embarcations de même grandeur et ayant les mêmes capacités que les embarcations utilisées pendant l'excursion doivent être désignées comme embarcation de sécurité.

31. Le rapport entre les bateaux de sécurité et les canots s'établit comme suit :

a. Un bateau de sécurité par groupe de six canots;

b. Le nombre d'embarcations de sécurité doit être augmenté lorsque l'état de l'eau est défavorable;

c. Les responsables de bateaux de sécurité doivent avoir réussi les Modules 1, 3 et 4 du Programme d'opérateur d'embarcation légère, lorsque les bateaux de sécurité sont propulsés par un moteur.

CARACTÉRISTIQUES D'UNE EMBARCATION DE SÉCURITÉ À MOTEUR

32. Les bateaux de sécurité, lorsqu'il s'agit d'embarcations à moteur, doivent être d'une taille et d'une puissance suffisantes pour mener à bien des opérations de sauvetage. La taille et la stabilité des bateaux de sécurité doivent être en rapport avec le plan d'eau où ils sont utilisés; en outre, leur longueur ne doit pas dépasser six mètres. Les bateaux doivent également posséder les caractéristiques suivantes :

a. Taille suffisante pour transporter un responsable, un adjoint et des blessés;

b. Puissance suffisante pour naviguer en amont;

c. Cordes tenant lieu de poignées fixées au plat-bord extérieur.

ÉQUIPEMENT D'UNE EMBARCATION DE SÉCURITÉ

33. Tous les bateaux de sécurité propulsés à l'aide **d'un moteur ou de pagaies** doivent être équipés des éléments suivants :

a. Un vêtement de flottaison individuel par personne;

b. One buoyant heaving line of not less than 15 metres in length;

c. One manual propelling device or an anchor with not less than 15 metres of cable, rope or chain in any combination;

d. One bailer or one manual water pump fitted with or accompanied by sufficient hose to enable a person using the pump to pump water from the bilge of the vessel over the side of the vessel;

e. A watertight flashlight or 3 Canadian approved flares of TYPE A, B or C (these orders recommend that the watertight flashlight be the option of choice for vessels of this size);

f. A sound signalling device or a sound signalling appliance;

g. One small repair kit appropriate for the crafts used during the activity; and

h. Navigation lights that meet the applicable standards set out in the Collision Regulations if the safety boat is operated after sunset and before sunrise or in periods of restricted visibility.

34. Additional safety equipment for power safety boats:

a. An additional rescue assisting device;

b. Two foil and plastic rescue blankets (or two wool blankets in waterproof bag);

c. One class C first-aid kit;

d. One Class 5BC fire extinguisher;

e. One VHF radio or use of proper means of communication to contact Base Station on shore;

f. One boat hook; and

g. Towline 9 m in length.

b. Une ligne d'attrape flottante longue d'au moins 15 mètres;

c. Un dispositif de propulsion manuel (pagaie ou rame) ou une ancre munie d'un câble, d'une corde ou d'une chaîne, quel que soit l'agencement, d'une longueur d'au moins 15 mètres;

d. Une écope ou une pompe à eau manuelle munie ou accompagnée d'un boyau d'une longueur suffisante pour permettre de pomper l'eau de cale et la déverser du côté de l'embarcation;

e. Une lampe de poche étanche ou trois fusées éclairantes de type A, B ou C, approuvées par les autorités canadiennes (la présente ordonnance recommande l'utilisation de la lampe de poche étanche comme dispositif sur ce type d'embarcation);

f. Un avertisseur sonore ou un appareil de signalisation sonore;

g. Une petite trousse d'outils (pour effectuer de menues réparations sur les canots).

h. Des feux de route conformes aux normes applicables établies dans les règlements sur les abordages, pour les embarcations de plaisance utilisées entre le coucher du soleil et le lever du jour ou en période de visibilité réduite.

34. Les embarcations doivent également être munies de l'équipement de sécurité suivant :

a. Deux vêtements de flottaison individuels de cadets de rechange;

b. Deux couvertures de secours en aluminium (ou deux couvertures de laine dans un sac imperméable à l'eau);

c. Une trousse de premiers soins de classe C;

d. Un extincteur de classe 5BC;

e. Un poste de radio VHF ou toute autre méthode efficace pour communiquer avec la station de base à terre;

f. Une gaffe; et

g. Câble de remorquage de 9 m de long.

35. These items shall be listed on a checklist, which shall be checked on each occasion that the safety boat is used.

RESCUES

36. Instructors and rescue boat operator must be trained in rescues. All paddlers must be trained in basic rescues so that they may help themselves in an emergency. Also, it is beneficial to develop a team approach to rescues and instruct team rescues to paddling groups.

37. The priority of rescue must always be:

a. People;

b. Boats; and

c. Equipment.

38. Group responsibilities in a rescue:

a. Alert other paddlers of victims in the water;

b. Other paddlers are too assist in a rescue to the best of their abilities when it is safe to do so;

c. All paddlers not involved in the rescue are to pull-over to one side of river when it is safe to do so, walk back upstream if necessary, and wait for further instruction; and

d. A rescue should not be attempted where conditions place the rescuers at significant risk.

EQUIPMENT AND CLOTHING

39. In addition to articles required by law, the following clothing and equipment is required to conduct canoe training in the Canadian Cadet Movement:

a. Equipment:

35. Ces articles sont inscrits sur une liste de contrôle, qui est vérifiée chaque fois que les bateaux de sécurité sont utilisés.

SAUVETAGES

36. Les instructeurs et les opérateurs d'embarcations de sécurité doivent suivre une formation en procédures de sauvetage. Tous les cadets doivent avoir reçu une formation de base en sauvetage afin qu'ils puissent s'aider entre eux en cas de situation d'urgence. Il peut être bénéfique d'amener les cadets à avoir une vision de groupe du sauvetage puisque la plupart des sauvetages se feront en équipe.

37. Les priorités lors de sauvetages doivent être :

a. Les personnes;

b. Les embarcations; et

c. L'équipement.

38. Les responsabilités du membre d'un groupe dans un sauvetage sont :

a. Avertir ses coéquipiers qu'il y a une victime à la mer;

b. Aider au meilleur de sa connaissance lors d'un sauvetage lorsqu'il est sécuritaire de le faire;

c. Tous les cadets non-impliqués dans la procédure de sauvetage doivent se diriger vers la côte la plus proche, remonter la rivière à pied, si nécessaire, et attendre les instructions; et

d. Un sauvetage ne doit pas être tenté lorsque les conditions placent les sauveteurs en situation de risque significatif.

ÉQUIPEMENT ET VÊTEMENTS

39. En plus des articles obligatoires par la loi, l'équipement et les vêtements suivants sont obligatoires à la mise sur pied d'activités de canot ou de kayak dans le mouvement des cadets du Canada :

a. Équipement :

(1) **Helmet.** A regionally approved helmet is **recommended** for wear at all times, but **mandatory** when operating on Class I and above river conditions or on the ocean, coastal and open water;

(2) **Canoes or kayaks.** Although aluminum canoes are good for learning basic strokes and how to steer in a flatwater environment, their design is often not adequate for intense, prolonged trip and moving water conditions. Aluminum canoes may be used for flatwater and moving water conditions, up to class I. Plastic, “Kevlar” and composite canoes should be used for moving water training and trips. All canoes must be capable of floating when filled with water. Canoes made of some materials may require buoyancy chambers to accomplish this.

(3) **Paddles.** Not every canoe/kayak training facility has the financial ability to purchase and maintain modern aluminium/plastic paddles. If relatively inexpensive wooden paddles must be used, they should be in good condition, and properly varnished. They should also be readily available in large quantities since they are easily broken.

(4) **Kneepads.** Some paddlers may require kneepads.

b. Clothing:

(1) **Layers.** Should be warm and wind/water resistant according to weather;

(2) **Shoes.** Must be worn at all times. Soft-sole lightweight running shoes or wet-suit booties with good soles are preferable especially if portages are expected. Sturdy sports sandals with solid buckles are acceptable for flat water paddling activities or when difficult portages are not expected. Sandals with loose Velcro attachments tend to let go once wet, and therefore are not acceptable.

(1) **Casque.** Il est **recommandé** de porter en tout temps le casque approuvé par région. Toutefois, le casque est **obligatoire** dans les rivières dont les conditions dépassent la cote I ainsi qu’en mer.

(2) **Canots ou kayaks.** Les canots en aluminium peuvent être très pratiques pour les exercices de manœuvres et les exercices en eau calme. Par contre, leur design n’est souvent pas adéquat pour des excursions prolongées ou des activités en eau vive. Les canots d’aluminium peuvent être utilisés dans les rivières dont les conditions ne dépassent pas la cote I. Des canots/kayaks en plastique, kevlar et composite devraient être utilisés en eau vive ou pour les excursions. Tous les canots/kayaks doivent flotter même remplis d’eau. Certains canots peuvent avoir besoin de flottaison additionnelle afin de répondre à cette exigence.

(3) **Pagaies.** Des pagaies en aluminium ou en plastique sont préférables. Par contre, vu le coût d’achat et d’entretien de ces types de pagaies, des pagaies en bois peuvent aussi être utilisées. Elles doivent être en bonnes conditions et correctement vernies. Elles doivent être disponibles en grande quantité puisqu’elles brisent facilement.

(4) **Protecteurs de genoux.** Certains cadets peuvent avoir besoin de protecteurs de genoux.

b. Habillement :

(1) **En « pelures d’oignon ».** Les vêtements devraient être résistants à l’eau et au vent, dépendant des conditions;

(2) **Souliers.** Ils doivent être portés en tout temps. Les espadrilles ou les souliers isothermiques (wetsuit) avec de bonnes semaines sont recommandées, surtout si du portage sera effectué. Des sandales de sport avec des boucles solides sont acceptables pour des activités en eau calme ou lorsque des parcours de portage difficiles ne sont pas prévus. Par contre, les sandales avec des attaches en Velcro qui tendent à se défaire lorsque mouillées ne sont pas acceptables.

(3) **PFDs** must always be worn as the last layer. An inspection must take place to ensure that the clothing required according to weather and temperature does not interfere with the buoyancy of the participants.

c. Inappropriate clothing are:

(1) Big rubber boots “farmer style” and combat boots;

(2) Flip-flops, clog type footwear or loose shoes/sandals; and

(3) Restrictive clothing or clothing that will become restrictive once submerged under water ex. Many layers of wool, jeans or clothing with elastics that will retain water.

TRAINING AREAS

40. Different training areas are required to accomplish different aspects of canoe training and tripping. Pre-trip training must be relevant and adequate to properly prepare the paddlers for the conditions they will face on the trip. The selection of training areas must therefore offer a safe learning environment appropriate for the training.

41. Although waterways are usually public property, their access often is not. Permission must be granted for access and evacuation points;

42. Training areas would usually be easily accessible, have washroom facilities, offer good control and communications. However other areas may be suitable if arrangements are made to handle emergencies, and to give participants a reasonable training area.

MOVING WATER SAFETY

43. When attempting a set of rapids or training at a set of rapids, it is necessary to establish both upstream and downstream safety. While upstream safety is important for other river users coming into a training area, downstream safety is important for the

(3) **VFI.** Les VFI doivent être portés par-dessus les vêtements. Le responsable de l’activité doit s’assurer que l’habillement des cadets ne diminue pas la capacité de flottaison du VFI.

c. Habillement inapproprié :

(1) Grosses bottes de caoutchouc et bottes de combat;

(2) Des sandales de douche, des mules ou des sandales non-ajustables; et

(3) Des vêtements qui restreignent les mouvements ou peuvent les restreindre une fois mouillés.

ZONES DE FORMATION

40. Différentes zones de formation sont requise afin de compléter les différents aspects de l’instruction du canot et du kayak. Les exercices préparatifs en vue d’une excursion doivent être faits dans des conditions représentatives de celles que les cadets subiront lors de l’excursion. Les zones d’instruction doivent offrir un environnement sécuritaire approprié au type d’exercice que l’on veut faire.

41. Même si la plupart des sites sont des propriétés publiques, les permissions d’accéder et d’évacuer le site doivent souvent être demandées.

42. Les zones d’instruction devraient habituellement être faciles d’accès, offrir des facilités au niveau de l’hygiène, offrir un bon contrôle des cadets et comprendre des moyens de communications efficaces. Par contre, d’autres zones peuvent être acceptables si les arrangements sont faits afin d’agir en cas d’urgence, et de donner aux cadets une zone acceptable pour l’instruction et les exercices requis.

SÉCURITÉ SUR LES EAUX EN MOUVEMENT

43. Avant de s’aventurer dans une série de rapides ou de procéder à des activités de formation dans une série de rapides, il est nécessaire d’établir la sécurité en amont et en aval. La sécurité en amont vise essentiellement les autres usagers de la rivière

participants of the training. In addition to the guidelines below, it is recommended to deploy multiple downstream safety alternatives :

a. Take the time to scout the rapids as necessary;

b. It may be necessary for safety personnel to walk down below the rapids to provide safety for the first canoe

c. It may be necessary to portage a canoe downstream if shore safety is not adequate for the conditions;

d. The first boat down, shall becomes the safety boat

e. It may be necessary to re-arrange paddlers and instructors within the group depending on conditions; and

f. Cadets should be given the option to attempt rapids or to portage around them.

BIG RIVERS, WILDERNESS AREAS AND OPEN WATER

44. Big rivers in flood, isolated wilderness locations and open water such as coastal waterways can often present extreme conditions compared to the ones encountered in other areas. The following points must be addressed in the organization of training and tripping in such conditions:

a. Organization, qualifications, experience and leadership;

b. Communications equipment and plan, it may be necessary to have more than one communication system and to pre-set a radio-check itinerary;

c. Medical emergency plan, it may be necessary to have medical staff on the trip;

d. Evacuation plan, it may be necessary to have a pre-set plan with the local authorities and helicopter access points;

qui arrivent dans la zone de formation, alors que la sécurité en aval vise à protéger les participants à l'activité de formation. En plus des lignes directrices ci-dessous, il est recommandé de déployer plusieurs mesures de sécurité de rechange :

a. prendre le temps de reconnaître les rapides au besoin;

b. Il peut être nécessaire qu'un responsable de la sécurité aille se poster sur la rive en aval des rapides pour assurer la sécurité du premier canot.

c. Il peut être nécessaire de transporter un canot en portage en aval si la sécurité sur la rive n'est pas adéquate compte tenu des conditions.

d. La première embarcation qui franchit les rapides doit servir de bateau de sécurité;

e. Il peut être nécessaire de redistribuer les pagayeurs et les instructeurs à l'intérieur du groupe en fonction des conditions;

f. Les cadets doivent avoir le choix de tenter de descendre les rapides ou de les contourner par portage.

GRANDS COURS D'EAU, RÉGIONS SAUVAGES ET EAUX LIBRES

44. Les grands cours d'eau en crue, les endroits isolés en pleine nature et les eaux libres comme les voies d'eau côtières présentent souvent des conditions extrêmes par rapport aux environnements habituels. Les points suivants doivent être pris en compte lors de l'organisation de la formation et des excursions dans de telles conditions :

a. Organisation, qualifications, expérience et leadership;

b. Équipement et plan de communication. Il peut être nécessaire de se munir de plus d'un système de communication et d'établir à l'avance un itinéraire de contrôle radio;

c. Plan d'urgence médicale. Il peut être nécessaire d'être accompagné par du personnel médical.

d. Plan d'évacuation. Il peut être nécessaire d'avoir un plan préétabli avec les autorités locales et d'avoir repéré les points d'accès par hélicoptère;

e. Canoe repairs and spare equipment;

f. Extra food and resources;

g. Special licenses and permissions may be necessary in some areas;

h. Specialized equipment and training; and

i. Risk assessment and management must be appropriate for the activity.

LIMITATIONS

45. Limitations on the canoeing and kayaking activity include the following:

a. Canoe/kayak training and tripping is restricted to Class 3 and lesser moving water. Extra caution must be taken with canoe activities taking place on large bodies of open water;

b. Canoe/kayak training is restricted to daylight hours. Canoe/kayak tripping is not restricted by daylight, however caution must be taken while operating in low visibility.

c. Paddling in reasonable visibility applies to canoeing/kayaking on flat water only. In moving water, no paddling will take place if any factors reduce visibility.

d. Paddling for rescue/safety purposes after daylight hours is permissible. However, when a significant risk exists, paddlers should not attempt rescue.

e. If it is required to canoe in low visibility conditions or darkness, then each paddler will wear an activated glow stick (or strobe light) on their PFD and each craft will either be equipped with an activated glow stick or navigation lights and one white light. In addition, at least two safety boats must be assigned

f. Canoe and kayak training and tripping must cease when in the presence of lightning.

e. Matériel de réparation de canots et kayaks et équipement de rechange;

f. Nourriture et ressources supplémentaires;

g. Permis et autorisations nécessaires, selon les régions;

h. Équipement et formation spécialisée;

i. Évaluation et gestion des risques liés à l'activité.

RESTRICTIONS

45. Les restrictions suivantes s'appliquent aux activités de canot et kayak :

a. La formation et les excursions en canot/kayak sont limitées à l'eau vive de cote III et de cotes inférieures. Les activités de canot qui ont lieu sur de vastes plans d'eau ou en mer libre exigent de la vigilance;

b. La formation en canot/kayak est limitée aux heures de clarté. Les excursions en canot/kayak ne sont pas restreintes aux heures de clarté; cependant, on doit faire preuve de prudence lorsque la visibilité est réduite.

c. Le canotage dans des conditions de visibilité raisonnable s'applique uniquement au canot/kayak en eaux calmes. Dans des eaux en mouvement, aucun canotage n'est permis lorsque la visibilité est réduite.

d. Le canotage aux fins de sauvetage ou de sécurité après les heures de clarté est possible. Toutefois, si un risque significatif existe, aucun sauvetage ne doit être tenté.

e. S'il est nécessaire de canoter dans des conditions de faible visibilité ou d'obscurité, chaque pagayeur doit porter un bâton lumineux activé sur son VFI et chaque embarcation doit être dotée d'un bâton lumineux activé ou de feux de navigation et d'un feu blanc. En outre, au moins deux bateaux de sécurité doivent être assignés.

f. Toute formation ou excursion en canot ou kayak doit être interrompue en cas d'éclairs.

g. While canoeing or kayaking in wind conditions described in the Wind Chart for Paddlers of the CCM, it may be required to return to shore, as quickly as it is safe to do so.

TRIPPING CONSIDERATIONS

46. The following points must be taken into consideration when planning a canoe trip:

a. Qualifications of participants;

b. Experience of participants and pre-trip training;

c. Fitness and medical status of all participants;

d. Risk management;

e. The weather forecast;

f. Appropriate clothing and equipment;

g. Use a safety checklist;

h. Familiarity and experience with area and conditions;

LEAD-UP TRAINING FOR TRIPS

47. Although it is understood that canoe trips are often a learning experience where much instruction and practice will take place during the conduct of the trip, some pre-trip training is required. Inherent risks exist in all types of paddling activities, and although training cannot guarantee the complete safety of cadets on a canoe/kayak trip, it is necessary to conduct the following minimum training prior to departure:

a. For cadets who have never participated in canoe training before, it is necessary to conduct at least two days of flatwater training prior to departure; including the basic strokes, immediate actions upon capsizing, basic rescues and the Declaration of Swimming Ability in Annex A of this Order;

g. Lors d'activités de canotage dans les conditions de vent décrites dans le Tableau des vents à l'intention des pagayeurs du MCC, il peut s'avérer nécessaire de regagner la rive dès que la sécurité le permet.

PLANIFICATION D'UNE EXCURSION

46. Les points suivants doivent être pris en considération lors de la planification d'une excursion en canot/kayak :

a. Qualifications des participants;

b. Expérience des participants et formation préalable;

c. Condition physique et état de santé de tous les participants;

d. Gestion des risques;

e. Prévisions météorologiques;

f. Habillement et équipement appropriés;

g. Utilisation d'une liste de contrôle des mesures de sécurité;

h. Connaissance et expérience de la région et des conditions.

FORMATION PRÉPARATOIRE POUR LES EXCURSIONS

47. Même si les excursions en canot/kayak constituent souvent une expérience d'apprentissage où intervient une large part d'enseignement et de pratique, une certaine formation préparatoire s'impose. Tous les types d'activités de canotage comportent des risques et, même si la meilleure préparation ne peut garantir l'entière sécurité des cadets pendant une excursion en canot/kayak, les participants doivent recevoir la formation minimale suivante avant le départ :

a. Les cadets qui n'ont jamais reçu de formation en canot/kayak doivent suivre une formation d'au moins deux jours en eaux calmes avant le départ, incluant les coups de pagaie de base, les mesures à prendre immédiatement après un chavirage, les techniques de sauvetage de base et la déclaration en aptitude en natation prévue à l'Annexe A de la présente Ordonnance;

b. If cadets have received the two day introduction before, then a one day review and practice right before the trip is adequate;

c. If cadets are going to paddle in moving water or open water, then they must receive at least one additional day of training appropriate to the content of the trip. The pre-trip training must include immediate actions upon dumping, basic strokes, swimming and self rescue for the conditions expected on the trip. Also dangerous conditions such as sweeper/strainer , low head dams and unhappy (frowning) holes or ledges must be discussed as part of pre-trip training if they are expected during the trip;

d. If the cadets have experience in canoe trips or moving water trips, than one day of practice is adequate prior to departure;

e. Although canoe training cannot take the place of kayak pre-training (and vice versa), some similarities exist and skills/knowledge can be carried over. If cadets are participating in a canoe/kayak trip with prior experience using another type of craft, then at least one day of pre-training must take place to familiarize the cadets with the appropriate craft. One day on flatwater prior to a flatwater trip, and an additional day of moving water training prior to moving water trips using the appropriate type of craft. Prior experience in rafting does not apply since there is usually little skill instructed during such an activity.

WEATHER CONSIDERATIONS

48. The guide for canoe / kayak activities is found at Annex C. This guide combines the Beaufort Scale and Safe Boating Guide marine weather forecast terminology to determine a safe canoe / kayak guide for cadets.

b. Si les cadets ont déjà suivi le programme d'initiation de deux jours, une journée de révision et de pratique constitue une préparation adéquate, si elle est dispensée juste avant l'excursion;

c. Si les cadets doivent pagayer sur des plans d'eau en mouvement, ils doivent suivre au moins une journée supplémentaire de formation adaptée au parcours de l'excursion. La formation préparatoire doit inclure les mesures à prendre immédiatement après un chavirage, les coups de base, la natation et les techniques d'auto-récupération pour les conditions prévues lors de l'expédition. En outre, les conditions dangereuses telles que la présence de drossages/passoires, de barrages, de basse chute, de rouleaux à rappel (trous) ou de seuils doivent être abordées dans le cadres de la formation préparatoire, le cas échéant.

d. Si les cadets ont une certaine expérience des excursions en canot/kayak sur des eaux en mouvement, une journée de pratique constitue une préparation suffisante avant le départ;

e. Bien que la formation en canot ne peut remplacer la formation en kayak (et vice versa), les deux activités comportent certaines similitudes et des compétences transférables. Si l'expérience des cadets participant à une excursion de canot/kayak a été acquise avec un autre type d'embarcation, au moins une journée de formation préalable est nécessaire pour leur permettre de se familiariser avec l'embarcation utilisée, soit une journée en eaux calmes avant une expédition en eaux calmes et une journée supplémentaire en eaux en mouvement avant une excursion en eaux en mouvement. La pratique du radeau pneumatique (rafting) ne constitue pas une expérience valable, ce type d'activité ne comportant généralement que très peu de formation.

CONSIDÉRATIONS MÉTÉOROLOGIQUES

48. Vous trouverez, à l'Annexe C, le guide relatif aux activités de canot / kayak. Ce guide permet de déterminer les conditions de navigation sans risque pour les cadets, selon l'échelle de Beaufort et la terminologie maritime du Guide de sécurité nautique.

49. Know the weather forecast.

50. It is permissible to paddle in the rain and fog but if it interferes with reasonable visibility or strong winds accompany the rain then it will be necessary for all crafts to return to shore, as soon as it is safe to do so. Paddling distance between crafts should be diminished during periods of poor visibility;

51. There shall be no paddling training or tripping while lightning is present, all crafts are to pull over to the closest shore as soon as it is safe to do so;

52. Although extremely cold or hot temperatures do not interfere directly with paddling, training and tripping must be adapted accordingly. It may be necessary to provide foam insulation against both cold and heat, especially in aluminium canoes, paddling gloves or pogies may also be necessary. Special consideration should be given to appropriate clothing such as wet and dry suits, and PFD buoyancy according to paragraph 39 b (3).

SAFETY CHECKLIST

53. A safety checklist is used during the preparation phase of a canoe trip. It should contain the following points, this list is not exclusive and safety checklists should be amended to match the activity planned:

a. File a trip plan (itinerary, path, expected timings, methods of contact) with local authority, training headquarters or use an on land safety vehicle;

b. Safety equipment required by law;

c. First aid equipment appropriate to size of group and type of activity;

d. Equipment checked for serviceability;

e. Emergency and evacuation plan, including details on how to contact Emergency Medical Services, and Headquarter support;

f. Food and water;

49. Il faut s'informer des prévisions météorologiques.

50. Il est possible de pagayer dans la pluie et le brouillard, mais si ces conditions compromettent la visibilité raisonnable ou lorsque la pluie est accompagnée de vents forts, toutes les embarcations doivent regagner la rive dès que la sécurité le permet. La distance entre les embarcations devrait être réduite pendant les périodes de faible visibilité.

51. Aucune formation ou excursion ne doit avoir lieu en cas d'éclairs. Toutes les embarcations doivent accoster sur la rive la plus proche dès que la sécurité le permet.

52. Même si les températures très froides ou très chaudes ne compromettent pas directement la pratique du canotage, les activités de formation et d'excursion doivent être adaptées en fonction de ces extrêmes. Il peut être nécessaire de recourir à de la mousse isolante contre le froid et la chaleur (particulièrement dans les canots en aluminium) et de se munir de gants ou de moufles de pagayeur (pogies). Une attention spéciale doit être accordée à l'habillement approprié comme les combinaisons étanches et isothermiques, ainsi qu'à la flottabilité des VFI décrite au paragraphe 39 b (3).

LISTE DE CONTRÔLE DE SÉCURITÉ

53. La liste de contrôle de sécurité est utilisée pendant la phase de préparation d'une excursion en canot/kayak. Elle devrait contenir les points suivants, sans y être limitée, et être mise à jour en fonction de l'activité planifiée :

a. Déposer un plan d'excursion (itinéraire, horaire, méthodes de communication) auprès des autorités locales, du quartier général de la formation ou utiliser un véhicule de sécurité terrestre;

b. Équipement de sécurité exigé par la loi;

c. Équipement de premiers soins adapté à la taille du groupe et au type d'activité;

d. Vérifier l'état de l'équipement;

e. Plan d'urgence et d'évacuation, incluant des renseignements détaillés sur la façon de communiquer avec le secours médical d'urgence et le quartier général;

f. Nourriture et eau;

g. Necessary living equipment;

h. Communications equipment and system of signals to be used within the group and to access outside help;

i. Leadership briefing detailing how the trip will be conducted;

j. River/trip log; and

k. Risk assessment and management.

FAMILIARITY WITH AREA

54. At least one instructor, usually the trip leader should have training/tripping experience of the area prior to conducting cadet training/tripping. If paddling experience is not available, extensive specific recces of the following points must be done prior to the trip. Written information, the Internet and local knowledge can be used to prepare for the trip. Map recces are a component of the preparation of a trip, and cannot serve as the sole source information prior to departure.

a. Put-in, take-out points;

b. Emergency evacuation point;

c. Camp sites, primaries and back-ups;

d. Rendez-vous points;

e. Alternate put-in and take-out points;

f. Environmentally sensitive areas; and,

g. Identified danger areas i.e. dams and portages.

GROUP ORGANIZATION AND LEADERSHIP FOR CANOE/KAYAK TRIPPING

55. An instructor or trip leader cannot also be only supervisor. Certain conditions require extra adult supervision i.e. moving, big or open water conditions, new cadets, instructors with little experience.

g. Équipement de subsistance;

h. Équipement de communication et système de signaux pour communiquer à l'intérieur du groupe et pour demander de l'aide extérieure;

i. Briefing de direction exposant en détail le déroulement de l'excursion;

j. Journal des excursions ou de la rivière; et

k. Évaluation et gestion des risques.

CONNAISSANCE DE LA RÉGION

54. Au moins un instructeur, habituellement le chef d'excursion, doit avoir de l'expérience en formation/excursion dans la région avant de mener une formation ou une excursion avec des cadets. À défaut d'une expérience de canotage pertinente, les aspects particuliers suivants doivent faire l'objet de reconnaissances intensives avant le départ. La documentation écrite, l'Internet et les connaissances locales sont autant de sources utiles d'information pour la préparation de l'excursion, qui ne devrait pas se limiter à la seule reconnaissance cartographique.

a. Points de mise à l'eau et de sortie;

b. Point d'évacuation d'urgence;

c. Campements principaux et de secours;

d. Points de rendez-vous;

e. Points de mise à l'eau et de sortie de remplacement;

f. Zones vulnérables du point de vue écologique;

g. Zones de danger identifié, p.ex. les barrages et les portages.

ORGANISATION ET DIRECTION DE GROUPE POUR LES EXCURSIONS EN CANOT/KAYAK

55. Un instructeur ou un chef d'excursion ne peut assumer à lui seul l'entière supervision du groupe. Certaines situations exigent la présence d'un autre superviseur adulte, par exemple, eaux en mouvement, grands cours d'eau ou eaux libres, nouveaux cadets, instructeurs peu expérimentés, etc.

56. Responsibilities of the lead craft are:

a. Set pace and keep track of group;

b. Select route to be followed;

c. Scouts rapids; and

d. Act as rescue boat if required (co-ordinate with power safety boat and sweep canoe), carry safety equipment.

57. Responsibilities of the sweep craft are :

a. Keeps group intact; and

b. May act as rescue boat and carry other safety equipment.

58. Group responsibilities :

a. Keep group compact;

b. Maintain sufficient spacing to avoid collisions (usually 3-5 canoe lengths);

c. Keep next canoe upstream in sight, signal to front canoe to stop if not;

d. Communication between the crafts must carry up and downstream;

e. Give the right of way to the downstream craft; and,

f. Judge difficulty according to experience and training.

INTERNATIONAL SCALE OF RIVER DIFFICULTY

59. Waterways are described using the International Scale of River Difficulty as follows:

a. Class I – Moving water with a few ripples and small waves. Few or no obstructions;

b. Class II – Easy rapids with waves up to 90 cm, and wide, clear channels that are obvious without scouting. Some manoeuvring is required;

56. Responsabilités de l'embarcation de tête :

a. Établir la cadence et superviser le groupe;

b. Sélectionner l'itinéraire à suivre;

c. Reconnaître les rapides;

d. Agir comme bateau de sauvetage au besoin (en coordination avec le bateau de sécurité à moteur et le canot/kayak de queue).

57. Responsabilités de l'embarcation de queue :

a. Garder le groupe ensemble;

b. Agir comme bateau de sauvetage et transporter d'autre équipement de sécurité au besoin;

58. Responsabilités du groupe :

a. Maintenir l'intégrité du groupe;

b. Maintenir un espace suffisant afin d'éviter les collisions (habituellement 3 à 5 longueurs de canot/kayak);

c. Ne pas perdre de vue le canot/kayak suivant en amont, sinon faire signe au canot/kayak précédent d'arrêter;

d. Transmettre les communications entre les embarcations en amont et en aval;

e. Accorder le passage à l'embarcation en aval;

f. Évaluer la difficulté selon l'expérience et la formation.

ÉCHELLE INTERNATIONALE DE DIFFICULTÉ DES RIVIÈRES

59. Les voies navigables sont définies selon l'échelle internationale de difficulté des rivières suivante :

a. Cote I – Courant avec quelques rides et petites vagues. Très peu d'obstacles.

b. Cote II – Rapides faciles, vagues pouvant atteindre 90 centimètres, chenaux dégagés et larges, aucune reconnaissance nécessaire. Quelques manœuvres à exécuter.

c. Class III – Rapids with high, irregular waves often capable of swamping an open canoe. Narrow passages that often require complex manoeuvring. May require scouting from shore;

d. Class IV – Long, difficult rapids with constricted passages that often require precise manoeuvring in very turbulent waters. Scouting from shore is often necessary, and conditions make rescue difficult. Generally not possible for open canoes. Boaters in covered canoes and kayaks should be able to Eskimo roll;

e. Class V – Extremely difficult, long, and very violent rapids with highly congested routes, which nearly always must be scouted from shore. Rescue conditions are difficult, and there is significant hazard to life in event of a mishap. Ability to Eskimo roll is essential for kayaks and canoes; and

f. Class VI – Difficulties of Class V carried to the extreme of navigability. Nearly impossibly and very dangerous. For teams and experts only, after close study and with all precautions taken.

60. **Note:** If rapids on a river generally fit into one of the above classifications but the water temperature is below 10° C, or if the trip is an extended trip in a wilderness area, the rapids should be considered one class more difficult.

RIVER CAPACITY

61. River capacities can be found in guidebooks; Provincial/ National Park information booklets and web sites; and by contacting damming authorities.

c. Cote III – Rapides avec des vagues profondes et irrégulières, pouvant remplir un canot non ponté. Des passages étroits obligeant souvent le pagayeur à exécuter des manœuvres difficiles. Une reconnaissance du passage depuis la rive peut être nécessaire.

d. Cote IV – Eau très turbulente, rapides difficiles et longs, passages étroits, obligeant souvent le pagayeur à exécuter des manœuvres précises. Il est souvent nécessaire de faire la reconnaissance du passage depuis la rive. De telles conditions rendent le sauvetage difficile. Ne pas s'aventurer sur ce genre de rivière en canot non ponté. Que ce soit en canot ou en kayak, le pagayeur se devrait de connaître la technique de l'esquimautage.

e. Cote V – Rapides très violents, longs et extrêmement difficiles, lit encombré dont on doit presque toujours faire la reconnaissance depuis la rive. Le sauvetage y est difficile et il peut y avoir danger de mort en cas de naufrage. Que ce soit en canot ou en kayak, le pagayeur doit absolument connaître la technique de l'esquimautage.

f. Cote VI – Ce sont les difficultés de parcours de cote V, portées au maximum; la rivière n'est presque plus navigable et très dangereuse. Seuls les équipes et les experts peuvent s'y aventurer, après avoir bien étudié le parcours et pris toutes les précautions nécessaires.

60. **Nota :** Si les rapides d'une rivière correspondent à l'une des cotes ci-dessus, mais que la température de l'eau est inférieure à 10°C, ou encore si l'excursion a lieu dans une région sauvage et représente un long trajet, le parcours doit être classé à une cote supérieure.

DÉBIT DES COURS D'EAU

61. On peut obtenir le débit des cours d'eau en consultant les livrets-guides, les brochures et les sites Web des parcs provinciaux et nationaux, et en communiquant avec l'administration des barrages.

CHAPTER 6

SWIMMING SAFETY ORDERS

GENERAL

1. These orders amplify the Interim CF Aquatics and Water Safety Policy and shall apply to all swimming activities within the Canadian Cadet Movement.

2. Swimming is recognized as an excellent venue for cadets to have fun and further develop their own physical fitness standards. Participation in a swimming program provides cadets with the following benefits:

a. The skills required to function effectively and safely in, on, or around the water;

b. An effective means of developing and maintaining physical fitness; and

c. The opportunity to further develop leadership ability through responsible participation in a safe swimming program.

AUTHORITY

3. The Director of Cadets is responsible for establishing policy. The Commanding Officers of Regional Cadet Support Units are responsible for appointing Lifeguards and approving swimming activities.

REGIONAL STANDING ORDERS AND STANDARD OPERATING PROCEDURES (SOSOPs)

4. The Regional SOSOPs established for each pool or waterfront area shall include:

a. Action to be taken in the event of an emergency, including the method of contacting medical, fire and police agencies;

b. Systems of control, including warning signals, whistles, alarms and search and rescue methods and procedures;

CHAPITRE 6

ORDONNANCES DE SÉCURITÉ POUR LA NATATION

GÉNÉRALITÉS

1. Ces ordonnances accentuent la Politique intérim portant sur les activité aquatiques et nautiques des Forces canadienne et doivent s'appliquer à toutes les activités de natation au sein du Mouvement des cadets du Canada.

2. La natation est reconnue comme un excellent moyen, pour les cadets, de se divertir et de perfectionner leurs aptitudes physiques en regard de la norme. La participation à un programme de natation offre aux cadets les avantages suivants :

a. Les compétences nécessaires pour fonctionner d'une manière sûre et efficace dans l'eau, sur un plan d'eau ou alentour;

b. Un moyen efficace de perfectionner et de conserver leurs aptitudes physiques;

c. La possibilité de perfectionner davantage leur aptitude à diriger en participant d'une manière sérieuse à un programme de natation qui n'entraîne pas de risque.

RESPONSABILITÉ

3. Le directeur des cadets est responsable de l'établissement de la politique. Les commandants des unités régionales de soutien des cadets sont responsables de la nomination de sauveteurs et de l'approbation d'activités de natation.

ORDRES PERMANENTS ET INSTRUCTION PERMANENTES D'OPÉRATION (OPIPO)

4. Les OPIPO régionaux établis pour chaque piscine ou secteur riverain comprennent les éléments suivants :

a. Mesures à prendre en cas d'urgence, notamment pour communiquer avec les services médicaux, de police et d'incendies;

b. Systèmes de contrôle, y compris les signaux d'alarme, les sifflets, les alarmes, ainsi que les méthodes et procédures de recherche et sauvetage;

c. User prerequisites, including requirements in swimming ability and age limitations;

d. Specific prohibitions, including details on reserved or restricted areas;

e. Control of the number of persons using the facility at any one given time;

f. Physical security arrangements, including hours of operation;

g. Management procedures, including delegated authorities;

h. Mandatory types of swimming apparel, including whether PFDs are required or not;

i. Instructions regarding special and common hazards;

j. Terms of reference for each management, supervisory, maintenance and custodial position, including the individual responsibilities for emergency and security procedures; and

5. All persons employed in the pool or waterfront area, whether as part of their normal duties as paid employees or as volunteers, shall initial as having read the Water-Based Training Safety Orders and Regional SOSOPs.

AUTHORIZED SWIMMING AREAS

6. Swimming is authorized for cadets in two types of locations:

a. A pool; or

b. A supervised waterfront area.

7. PFDs are not required to be worn when swimming in a pool or supervised waterfront area.

8. During an exercise, cadets may be operating in areas where there is NO swimming pool or supervised waterfront area. In such circumstances swimming may be permitted in available waterfront areas if:

c. Conditions préalables visant les utilisateurs, y compris les compétences requises en natation, de même que les limites d'âge;

d. Interdictions précises, y compris des renseignements détaillés relatifs aux zones réservées ou réglementées;

e. Contrôle ponctuel du nombre de personnes qui utilisent les installations;

f. Dispositions relatives à la sécurité physique, y compris les heures d'activité;

g. Procédures de gestion, y compris les pouvoirs délégués;

h. Matériel de natation obligatoire, y compris les vêtements de flottaison individuels, qui peuvent ou non être exigés;

i. Directives relatives à des dangers particuliers et courants;

j. Attributions propres à chaque poste de direction, de supervision, d'entretien et de garde, y compris les responsabilités relatives aux procédures d'urgence et de sécurité;

5. Tous les membres du personnel de piscines et de secteurs riverains doivent apposer leurs initiales pour confirmer qu'elles ont pris connaissance des Ordonnances de Sécurité pour la Formation Nautique et les OPIPO régionaux, que ce soit dans le cadre de leurs fonctions régulières à titre d'employés rémunérés ou de bénévoles.

LIEUX DE NATATION APPROUVÉS

6. Les cadets peuvent pratiquer la natation dans deux types d'endroits :

a. Des piscines;

b. Des secteurs riverains surveillés.

7. Le port de vêtements de flottaison individuels n'est pas obligatoire lorsque la natation est pratiquée dans une piscine ou un secteur riverain surveillé.

8. Durant un exercice, les cadets peuvent se trouver dans des zones où il n'y a PAS de piscines, ni de secteurs riverains surveillés. La pratique de la natation peut alors être autorisée dans des secteurs riverains accessibles, aux conditions suivantes :

a. PFDs are worn;

b. The swimming area available is examined for sanitary considerations and hazardous conditions;

c. All personnel are briefed on water safety procedures and special dangers of the area;

d. Minimum number of Lifeguards are available (see para 72.);

e. Reaching, throwing and towing aids are available or improvised;

f. A boat patrol is established for deep water swimming;

g. The Buddy System is used with checks at not less than 15 minute intervals;

h. The area is roped and buoyed off; and

i. An emergency communication system and transportation is available on-site.

LIFEGUARDS

9. No swimming activities shall take place unless there is a qualified lifeguard in charge. A qualified lifeguard must hold the Lifesaving Society (LSS) NLS certificate or the minimum lifeguard qualification as required by provincial legislation. Check with the Lifesaving Society in your province to determine provincial standards, although preference is given to the NLS qualification.

10. Additionally, IAW CF Aquatics and Water Safety Policy, Lifeguards may be either military, civilian, civilian instructors or staff cadets whom:

a. Are not less than 16 years of age;

a. Les cadets portent des vêtements de flottaison individuels;

b. On examine le plan d'eau accessible du point de vue de l'hygiène et des risques;

c. Tous les membres du personnel sont avisés des consignes de sécurité nautique et des dangers particuliers que présente le secteur;

d. Un nombre minimal de sauveteurs est disponible (voir para 72.);

e. Des pinces télescopiques, des bouées et des lignes d'attrape sont disponibles ou improvisées;

f. On établit une patrouille nautique pour la natation en eau profonde;

g. On utilise le système de surveillance mutuelle, selon lequel des vérifications sont effectuées au moins toutes les 15 minutes;

h. Le secteur est entouré par un cordon et balisé; et

i. Un système de communication d'urgence et un système de transport adéquat sont disponibles sur place.

SAUVETEURS

9. La pratique de la natation n'est pas autorisée, sauf sous la surveillance d'un sauveteur qualifié. Un sauveteur qualifié doit détenir la certification de Sauveteur National de la Société de Sauvetage ou la certification de sauvetage minimale requise par l'association provinciale. Consulter la Société de Sauvetage de votre province afin de déterminer les normes provinciales, même si la préférence est donnée à la certification de Sauveteur National.

10. De plus, selon la politique des FC concernant les Sports et la Sécurité Nautiques, les fonctions de sauveteur peuvent être exercées par des militaires, des civils, des instructeurs civils ou des cadets-cadres qui répondent aux exigences suivantes :

a. Avoir au moins 16 ans;

b. Hold the LSS NLS qualification (preferred) or the required provincial qualifications, obtained or renewed within the previous two years:

c. Are trained on the following minimum skills prior to beginning employment and at least quarterly thereafter:

(1) Removal of a 9kg weight from the deepest area of the pool;

(2) 25m continuous swim in 17.5 secs or less;

(3) removal of a submerged (min 3m depth) unconscious, non breathing victim;

(4) 20m approach swim and 5m carry of a conscious swimmer;

(5) deep water spinal turnover;

(6) sequence of rescue breathing, obstructed airway and/or CPR;

(7) lifeguard scanning, rotation and supervision zone protocols; and

(8) additional site-specific skills as deemed appropriate.

11. Lifeguards shall have NO duties requiring their absence from the pool deck or water area when swimmers are present.

12. Lifeguards shall be attired so that they are easily identifiable, with LIFEGUARD displayed in broad letters across clothing..

13. When Lifeguards consider that a safety hazard exists because of excessive turbidity, or the presence of undesirable or dangerous material in the water, or on the pool deck or waterfront area, or because of any other dangerous circumstances, they shall close the pool or ensure that swimming ceases and notify those who are responsible for the pool or waterfront area maintenance.

b. Posséder la certification de Sauveteur National de la Société de Sauvetage ou les qualifications provinciales exigées et les avoir acquises ou renouvelées dans les deux ans précédents;

c. Avoir appris les aptitudes suivantes avant le début de la période d'emploi et les réviser au moins chaque 3 mois suivants :

(1) Retrait d'un poids de 9 kg du point le plus profond de la piscine;

(2) Nage continue sur 25m en 17.5 secondes ou moins;

(3) Retrait d'une victime submergée (à au moins 3m de profondeur) inconsciente et qui ne respire pas;

(4) Approche à la nage sur 20m et transport d'un nageur conscient sur 5m;

(5) Technique de sauvetage d'une victime blessée à la colonne vertébrale en eau profonde;

(6) Série de respiration de secours et de techniques en cas de voies respiratoires obstruées et/ou RCR;

(7) Protocole de balayage visuel, de rotation et de zone de surveillance du sauveteur;

(8) Aptitudes additionnelles selon le site, si jugé approprié.

11. Les sauveteurs NE doivent PAS assumer de fonctions qui les obligent à s'absenter du pourtour de la piscine ou du plan d'eau lorsque des baigneurs s'y trouvent.

12. Les sauveteurs doivent être vêtus de manière à être facilement reconnaissables, et doivent porter le mot SAUVETEUR en grosses lettres sur leurs vêtements.

13. Lorsque les sauveteurs considèrent qu'il y a risque d'accident en raison d'une turbidité excessive, de la présence de matières indésirables ou dangereuses dans l'eau, sur le pourtour de la piscine ou dans le secteur riverain ou d'autres conditions dangereuses, ils doivent fermer la piscine ou veiller à ce que les baigneurs cessent de nager et aviser les personnes responsables de l'entretien de la piscine ou du secteur riverain.

14. Where a swimming pool is in use or when a waterfront area is being used for swimming, the OIC shall ensure that sufficient Lifeguards are available to meet the minimum requirements of the activity:

a. Minimum number of lifeguards required when a pool is used for activities other than aquatic instruction:

(1) 1 to 30 personnel require 1 Lifeguard (either NLS certified or as per appropriate provincial legislation);

(2) 31 to 100 personnel require 2 Lifeguards (if both the lifeguards are NLS certified then the bather load can increase to 125);

(3) 101 to 200 personnel require 3 Lifeguards (if all 3 lifeguards are NLS certified then the bather load can increase to 250); and

(4) 201 to 300 personnel require 4 Lifeguards (if all 4 lifeguards are NLS certified then the bather load can increase to 400).

b. Minimum number of Lifeguards required in addition to the Aquatic Instructor, when a pool is used for aquatic instruction only:

(1) 1 to 25 students require 0 Lifeguards;

(2) 26 to 60 students require 1 Lifeguard; and

(3) over 60 students require 2 Lifeguards.

(4) Note: a Lifeguard provided in addition to the Aquatic Instructor may also give aquatic instruction.

c. Minimum number of Lifeguards required when a waterfront area is used for organized activities:

(1) 1 to 50 swimmers require 2 Lifeguards;

14. Lorsqu'une piscine est utilisée ou qu'un secteur riverain sert à la pratique de la natation, l'agent responsable doit s'assurer qu'un nombre suffisant de sauveteurs est disponible pour répondre aux exigences minimales de l'activité :

a. Nombre minimal de sauveteurs exigé lorsqu'une piscine sert à la pratique d'activités autres que l'enseignement de la natation :

(1) Un sauveteur exigé pour une à 30 personnes (Sauveteur National ou qualification provinciale équivalente);

(2) Deux sauveteurs exigés pour 31 à 100 personnes (si les 2 sauveteurs sont certifiés Sauveteurs Nationaux, le nombre de personnes peut augmenter à 125);

(3) Trois sauveteurs exigés pour 101 à 200 personnes (si les 3 sauveteurs sont certifiés Sauveteurs Nationaux, le nombre de personnes peut augmenter à 250);

(4) Quatre sauveteurs exigés pour 201 à 300 personnes (si les 4 sauveteurs sont certifiés Sauveteurs Nationaux, le nombre de personnes peut augmenter à 400).

b. Nombre minimum de sauveteurs exigé, outre le moniteur en natation, lorsqu'une piscine est utilisée pour l'enseignement de la natation uniquement :

(1) Aucun sauveteur exigé pour un à 25 étudiants;

(2) Un sauveteur exigé pour 26 à 60 étudiants;

(3) Deux sauveteurs exigés pour un groupe de plus de 60 étudiants.

(4) Nota : Un sauveteur affecté en sus d'un moniteur en natation peut également enseigner la natation.

c. Nombre minimum de sauveteurs exigé lorsqu'un secteur riverain est utilisé pour la pratique d'activités organisées :

(1) Deux sauveteurs exigés pour un à 50 nageurs;

(2) 51 to 150 swimmers require 3 Lifeguards;

(3) 151 to 300 swimmers require 4 Lifeguards; and

(4) over 300 swimmers require 5 Lifeguards.

15. As with all cadet activities, if the Lifeguard is not a CIC Officer or a CI, there must be a CIC Officer or CI in charge of the swimming activity.

SAFETY EQUIPMENT

16. At each swimming pool an emergency telephone shall be provided on the pool deck, in an adjoining staff area or within an accessible distance of a waterfront area. It may be either a direct line to emergency services, or to the local telephone utility. The phone must be clearly marked by colour or distinguishable markings. The telephone shall be tested on each occasion the pool is opened to ensure that the system is operating.

17. Each pool greater than 150 square metres shall be equipped with one or more control systems which shall be:

a. An elevated platform or chair secured to the pool deck;

b. Close to the side of the pool; and

c. At least six feet above the water surface and so located as to permit an unobstructed view of the pool bottom in the area under surveillance.

18. Each pool shall have conveniently located for emergency use:

a. One or more reaching poles at least 12 feet long;

b. Two or more buoyant throwing aids, with attached rope at least as long as one-half the width of the pool plus 10 feet;

c. A first aid kit; and

(2) Trois sauveteurs exigés pour 51 à 150 nageurs;

(3) Quatre sauveteurs exigés pour 151 à 300 nageurs;

(4) Cinq sauveteurs exigés pour un groupe de plus de 300 nageurs.

15. Tout comme pour le reste des activités des cadets, lorsqu'un sauveteur n'est pas un officier du CIC ou un IC, l'activité de natation doit s'effectuer sous la surveillance d'un officier de l'CIC ou un IC responsable.

ÉQUIPEMENT DE SÉCURITÉ

16. Toutes les piscines doivent être dotées d'un téléphone d'urgence sur le pourtour de la piscine, dans un bureau de moniteur adjacent ou à une distance accessible de la zone de baignade. Il peut s'agir d'une ligne directe reliée à un service d'urgence ou de la ligne de téléphone locale. Le téléphone doit être clairement identifié à l'aide de couleurs ou de signaux reconnaissables. On doit essayer le téléphone chaque fois que l'on ouvre la piscine, afin de s'assurer que le système fonctionne.

17. Chaque piscine d'une superficie supérieure à 150 mètres carrés doit être équipée d'un ou de plusieurs dispositifs de surveillance, c'est-à-dire :

a. Une plate-forme ou une chaise surélevée fixée au pourtour de la piscine située :

b. À proximité du bord de la piscine;

c. À une distance d'au moins deux mètres de la surface de l'eau et disposée de manière à offrir une vue dégagée du fond de la piscine dans la zone de surveillance.

18. Chaque piscine doit être équipée des éléments suivants, situés de manière à être facilement accessibles en cas d'urgence :

a. Au moins une perche longue d'au moins quatre mètres;

b. Au moins deux bouées flottantes, munies d'une corde d'une longueur au moins équivalente à la moitié de la largeur de la piscine, plus trois mètres;

c. Une trousse de premiers soins; et

d. A spineboard, or equipment for moving a person who has a spinal injury.

19. Safety equipment for waterfront areas vary with the particular area. The following are to be the minimum requirements:

a. Elevated control stations;

b. Ring buoys;

c. Paddle boards;

d. First aid kit; and

e. Loud hailer.

20. Wherever practical, a telephone should be available within a reasonable distance of a waterfront area. In addition, appropriate transportation must be available whenever a waterfront area is being used for organized activities.

INSPECTION

21. All safety equipment, security devices, exits, entrances, pool areas and dressing rooms shall be inspected immediately before opening the pool to swimmers and immediately before closing. All inspections shall be recorded in a daily log book.

REPORTS

22. A log for each swimming area shall be maintained to record usage figures, details of injuries, pool chemistry readings, accidents, and safety equipment deficiencies. A copy of validated lifeguard qualification will also be maintained on-site.

d. Une planche dorsale ou de l'équipement pouvant servir à transporter une personne victime d'une blessure à la colonne vertébrale.

19. L'équipement de sécurité exigé dans les secteurs riverains varie d'un secteur à l'autre. Les éléments suivants constituent les exigences minimales :

a. Postes de surveillance surélevés;

b. Bouées en anneau;

c. Pagaies;

d. Trousse de premiers soins;

e. Mégaphone.

20. Dans la mesure du possible, on doit avoir accès à un téléphone situé à une distance raisonnable du secteur riverain. De plus, on doit établir un dispositif de transport approprié chaque fois qu'un secteur riverain est utilisé à des fins d'activités organisées.

INSPECTION

21. Tout le matériel de sécurité, de même que les dispositifs de sûreté, les sorties, les entrées, les installations de la piscine et les vestiaires doivent être inspectés immédiatement avant l'ouverture et après la fermeture des piscines. Toutes les inspections doivent être notées dans un livret journalier.

RAPPORTS

22. On doit tenir un registre pour chaque lieu où est pratiquée la natation, afin d'y consigner des données relatives à l'utilisation, des renseignements détaillés touchant les blessures, les vérifications du niveau de chlore, les accidents, de même que les défectuosités de l'équipement de sécurité. Une copie des certifications valides des sauveteurs doit aussi être conservée sur place.

CHAPTER 7

SCUBA DIVING

PURPOSE

1. This order addresses the sport of recreational SCUBA diving as optional Corps or Squadron training and details how Sea, Army and Air Cadets may participate. The training and diving that Cadets may engage in is intended to qualify and help them SCUBA dive without exposure to undue risk. In pursuit of the objective to qualify cadets within the established sport of recreational SCUBA diving, cadets will be restricted to the parameters outlined in this order and CATO 14-10.

AIM

2. The aim of this CATO is to ensure that all personnel follow established SCUBA safety and operating practices. The standards the Cadet program will follow are those established by the Recreational SCUBA Training Council and those agencies recognized in Paragraph 8.

GENERAL

3. Historically, CIC members and cadets have participated in SCUBA diving activities within established summer training activities and at the Corps and Squadron level. To date, there has not been any orders to address this activity, a requirement this CATO fills.

4. SCUBA diving under this order is classified as Optional Training. As the Canadian Forces is not required to support Optional Training, support for SCUBA activities will have to be provided by sponsors or cadets themselves.

AUTHORITY

5. The Director of Cadets is responsible for establishing the policy on minimum safety requirements for Cadet scuba activities. The Commanding Officers of Regional Cadet Support

CHAPITRE 7

PLONGÉE SOUS-MARINE

BUT

1. La présente ordonnance traite du sport de la plongée sous-marine en tant qu'activité d'instruction facultative pour les corps et escadrons et décrit en détail la façon dont les cadets de la Marine, de l'Armée et de l'Aviation peuvent participer. Les cadets ont la possibilité de suivre des cours et de faire de la plongée afin d'acquérir les qualités requises pour pratiquer la plongée sous-marine sans courir de risques injustifiés. Afin d'être admis dans le sport établi de la plongée sous-marine, les cadets devront respecter les restrictions imposées par les paramètres énoncés dans cette Ordonnance et dans l'OAIC 14-10.

OBJET

2. L'objet de la présente OAIC est de garantir que tout le personnel suit les pratiques de sécurité et d'opération établies en ce qui a trait à la plongée sous-marine. Le programme pour les cadets respectera les normes établies par le Recreational SCUBA Training Council et les organismes reconnus au paragraphe 8.

GÉNÉRALITÉS

3. De par le passé, des membres du CIC et des cadets ont participé à des activités de plongée sous-marine lors de cours d'été reconnus et dans les corps et escadrons. Jusqu'à présent, aucune ordonnance n'a été émise pour traiter de ce genre d'activité : la présente OAIC vient combler cette lacune.

4. Conformément à la présente ordonnance, la plongée sous-marine entre dans la classification d'activité d'instruction facultative. Étant donné que les Forces canadiennes n'ont pas l'obligation d'appuyer l'instruction facultative, les comité de parrainage ou les cadets eux-mêmes devront fournir le soutien aux activités de plongée sous-marine.

AUTORITÉ

5. Le directeur des cadets est responsable de l'établissement de la politique relative aux normes minimales de sécurité en ce qui a trait aux activités de plongée sous-marine des cadets. Les

Units are responsible for ensuring qualified instructors are conducting scuba activities IAW this order and CATO 14-10. Regions may impose Regional Orders to cover local conditions to amply this order.

DEFINITIONS

6. For the purpose of this order:

a. ACUC means “American and Canadian Underwater Certification”;

b. CI means “Civilian Instructor”;

c. CF means “Canadian Forces”;

d. CMAS means “Confédération Mondiale des Activités Subaquatiques”;

e. DAN means “Divers Alert Network”;

f. DI means “Dive Instructor”, an individual who is qualified to provide SCUBA instruction;

g. DM means “Dive Master”, an individual who is qualified to organize and lead SCUBA divers. The DM fills the role of a Dive Supervisor;

h. IDEA means “Independent Diving Education Association”;

i. NASDS means “National Association of Scuba Diving Schools”;

j. NAUI means “National Association Of Underwater Instructors”;

k. OIC means “Officer in Charge”, as authorized by the Corps CO and Detachment;

commandants des unités régionales de soutien des cadets sont responsables de s’assurer que les activités de plongée sous-marine sont supervisées par des instructeurs qualifiés selon cette Ordonnance et l’OAIC 14-10. Les autorités régionales peuvent imposer des ordonnances régionales adaptées aux conditions locales et qui complètent les présentes ordonnances.

DÉFINITIONS

6. Aux fins de la présente ordonnance :

a. ACUC signifie « American and Canadian Underwater Certification »;

b. CP signifie « chef de plongée », un individu, remplissant le rôle de surveillant de plongée, dont les qualifications le rendent apte à assurer l’organisation et la direction des plongeurs sous-marins;

c. CMAS signifie « Confédération mondiale des activités subaquatiques »;

d. DAN signifie « Divers Alert Network »;

e. FC signifie « Forces canadiennes »;

f. IC signifie « instructeur civil »;

g. IDEA signifie « Independent Diving Education Association »;

h. MP signifie « moniteur de plongée », un individu dont les qualifications le rendent apte à donner des cours de plongée sous-marine;

i. NASDS signifie « National Association of Scuba Diving Schools »;

j. NAUI signifie « National Association Of Underwater Instructors »;

k. O Resp signifie « officier responsable », fonction qui est assignée par le commandant du corps et le détachement;

l. On Surface Supervisor denotes an Officer, CI, Senior Cadet or parent who is not participating in a given dive and who is able to supervise cadets on the surface under the direction of the OIC;

m. Open Water Dive denotes a SCUBA activity in any body of water larger than a swimming pool;

n. PADI means “Professional Association of Diving Instructors”;

o. POW means “Preserve our Wrecks” an organization dedicated to conserving ship wrecks;

p. RSTC means “Recreational Scuba Training Council”;

q. RSTCC means “Recreational SCUBA Training Council of Canada”;

r. SCUBA means “Self Contained Underwater Breathing Apparatus”;

s. SOS means “Save Ontario Shipwrecks”, an organization dedicated to conserving ship wrecks; and

t. WSTC means “World SCUBA Training Council”.

DIVING PROCEDURES

7. All SCUBA diving will be done in accordance with the latest regulations promulgated by any of the recognized agencies listed in Paragraph 8. As SCUBA diving procedures are always in the process of being updated, it is imperative that individuals delivering SCUBA expertise be current with their respective organization’s procedures. The creation of a customized set of diving rules for Cadets would be counterproductive and challenging to maintain. SCUBA diving within the Cadet program is intended to be set up in such a way that it can be easily delivered within the average community using local resources. The recognized agencies are the established professionals when it comes to SCUBA diving. Each has established a system that works well and employs all the required safety mechanisms through their membership in the RSTC.

l. PADI signifie « Professional Association of Diving Instructors »;

m. plongée en eau libre signifie une activité de plongée sous-marine effectuée dans une étendue d’eau plus grande qu’une piscine;

n. POW signifie « Preserve our Wrecks », un organisme spécialisé dans la conservation des épaves;

o. RSTC signifie « Recreational SCUBA Training Council »;

p. RSTCC signifie « Recreational SCUBA Training Council of Canada »;

q. « SCUBA », sans objet en français;

r. SOS signifie « Save Ontario Shipwrecks », un organisme spécialisé dans la conservation des épaves;

s. superviseur à la surface signifie un officier, IC, cadet supérieur ou parent qui ne participe pas à une plongée déterminée et qui est apte à superviser les cadets à la surface sous la direction de l’officier responsable;

t. WSTC signifie « World SCUBA Training Council ».

PROCÉDURES DE PLONGÉE

7. Toutes les activités de plongée sous-marine seront effectuées conformément aux derniers règlements promulgués par l’un ou l’autre des organismes reconnus énumérés au paragraphe 8. Étant donné que les procédures de plongée sous-marine sont continuellement mises à jour, il faut absolument que les individus qui font la prestation de leur expertise en plongée sous-marine soient au courant des procédures de leur organisme respectif. La création d’un ensemble de règlements sur la plongée adaptés aux cadets serait improductive et difficile à maintenir. Dans le cadre du programme pour les cadets, la plongée sous-marine est organisée de façon à ce qu’elle soit facile à réaliser au moyen des ressources locales dans la communauté en général. Les organismes reconnus sont des professionnels établis en matière de plongée sous-marine. Chacun d’eux a su établir un système qui fonctionne bien et utilise tous les mécanismes de sécurité requis grâce à sa participation au RSTC.

ACCREDITATION

8. The OIC must ensure that the credentials of a DI or DM are current and that the proper liability insurance is in place. The following seven organizations (sub-paragraphs a-g) provide recognized DI and DM credentials. Credentials must be verified by contacting the relevant group through one of the following phone numbers, e-mail addresses or Internet web sites. Please note that information may not always be available in both official languages from these organizations.

a. **ACUC**

ACUC International
1264 Osprey Drive
Ancaster, On L9G 3L2
(905) 648-5500
e-mail: acuc@acuc.es
Internet: www.acuc.es

b. **CMAS**

Viale Tiziano
74-00196 Roma, Italy
011-39-06-36858480
011-39-06-36858490 (fax)
e-mail: cmasspo@tin.it

c. **IDEA**

194 Victoria Street North
Kitchener, On N2H 5C6
(519) 742-5415
(519) 742-4330 (fax)
Internet:www.grounhogdivers.com

d. **NAUI**

1-800-553-6284 in Tampa
e-mail: naui@aol.com
www.naui.com
Or in Canada c/o:
Dive Mar at (613) 821-2470
e-mail: info@divemar.com
Internet: www.divemar.com

e. **NASDS**

634 Victoria Street
Kamloops, B.C. V2C 2B4
(250) 828-2868
e-mail: nasdscanada@
bc.sympatico.ca

ACCRÉDITATION

8. L'officier responsable (O Resp) doit s'assurer que les titres de compétences d'un moniteur de plongée (MP) ou d'un chef de plongée (CP) sont à jour et que la bonne assurance-responsabilité est en vigueur. Les sept organismes suivants (alinéas a à g) procurent des titres de compétences du MP et de CP reconnus. Ces pièces doivent être vérifiées en communiquant avec le groupe approprié, soit par téléphone, par courriel ou en visitant les sites web sur l'Internet. Prière de noter que ces organismes ne sont pas toujours en mesure de fournir des renseignements dans les deux langues officielles.

a. **ACUC**

ACUC International
1264, prom. Osprey
Ancaster (Ontario) L9G 3L2
(905) 648-5500
courriel : acuc@acuc.es
Internet : www.acuc.es

b. **CMAS**

Viale Tiziano
74-00196 Rome, Italie
011-39-06-36858480
011-39-06-36858490 (télécopieur)
courriel : cmasspo@tin.it

c. **IDEA**

194, rue Victoria North
Kitchener (Ontario) N2H 5C6
(519) 742-5415
(519) 742-4330 (télécopieur)
Internet : www.grounhogdivers.com

d. **NAUI**

1-800-553-6284 à Tampa
courriel : naui@aol.com
www.naui.com
Ou au Canada a. s. de :
Dive Mar au (613) 821-2470
courriel : info@divemar.com
Internet : www.divemar.com

e. **NASDS**

634, rue Victoria
Kamloops (C.-B.) V2C 2B4
(250) 828-2868
courriel : nasdscanada@
bc.sympatico.ca

f. **PADI**

3771 Jacombs Road
Building C, suite 535
Richmond, B.C. V6V 2L9
1-800-565-8130
(604) 273-0277
(604) 273-0299 (fax)
Internet: www.padi.com

g. **RSTC**

3771 Jacombs Road
Building C, suite 535
Richmond, B.C. V6V 2L9
1-800-565-8130
(604) 273-0277
(604) 273-0299 (fax)

Note: RSTC is administered in Canada by PADI.

9. In the event credentials are presented from any other agency not shown in Paragraph 8, permission must first be sought well in advance from the OPI Cadet SCUBA Diving at the Directorate of Cadets, in Ottawa, prior to the commencement of any SCUBA activities.

OVERALL SUPERVISION

10. SCUBA diving as an Optional Activity for Cadets must be supervised by an Officer and first be approved by the area Cadet Detachment. Where Cadets are undergoing SCUBA training or participating in a dive where the DI or DM is not an Officer, an Officer must supervise the activity. Where an Officer is the DI or DM, an additional Officer will be required for “surface” supervision.

SCUBA INSTRUCTION

11. Only accredited and insured DI’s from those agencies listed in Paragraph 8 are permitted to deliver SCUBA instruction to Officers and Cadets under the auspices of CF-League sponsored Cadet training. An Officer, CI or Cadet may, if fully qualified, deliver SCUBA instruction. In such a case, one additional person will be required for “surface” supervision. Unless accredited and insured from those agencies listed in Paragraph 8, Naval

f. **PADI**

3771, ch. Jacombs
Édifice C, suite 535
Richmond (C.-B.) V6V 2L9
1-800-565-8130
(604) 273-0277
(604) 273-0299 (télécopieur)
Internet : www.padi.com

g. **RSTC**

3771, ch. Jacombs
Édifice C, suite 535
Richmond (C.-B.) V6V 2L9
1-800-565-8130
(604) 273-0277
(604) 273-0299 (télécopieur)

Note : le RSTC est administré au Canada par la PADI.

9. Si les titres de compétences sont obtenus d’un organisme non mentionné au paragraphe 8, on doit obtenir une permission au préalable du BPR Plongée sous-marine pour cadets à la Direction des cadets, à Ottawa, avant le début de toute activité de plongée sous-marine.

SUPERVISION GLOBALE

10. La plongée sous-marine, en tant qu’activité facultative pour les cadets, doit être supervisée par un officier et d’abord être approuvée par le détachement des cadets du secteur. Lorsque les cadets suivent un cours de plongée sous-marine ou participent à une activité de plongée et que le moniteur de plongée ou le chef de plongée n’est pas un officier, l’activité doit être supervisée par un officier. Lorsque l’officier est un MP ou un CP, un autre officier doit effectuer la supervision « à la surface ».

ENSEIGNEMENT DE LA PLONGÉE SOUS-MARINE

11. Seuls les instructeurs de plongée agréés et assurés par les organismes énumérés au paragraphe 8 ont le droit d’enseigner la plongée sous-marine aux officiers et aux cadets lors de cours donnés pour les cadets, que parrainent les FC et les Ligues. Un officier, instructeur civil (IC) ou cadet peut, s’il est pleinement qualifié, enseigner la plongée sous-marine. Dans un tel cas, une personne additionnelle doit assurer la supervision « à la

Clearance and Ship's Divers are not authorized to instruct or supervise Cadet diving activities. Such personnel are trained to perform a function that is very different from that of Sport Diving and utilize methods that are not appropriate for novice divers.

surface ». À moins d'être agréés et assurés par les organismes énumérés au paragraphe 8, les plongeurs-démineurs et plongeurs de bord ne sont pas autorisés à enseigner la plongée aux cadets ni à les superviser lors d'activités ayant trait à ce sport. Ces personnes sont entraînées pour exécuter une tâche qui est très différente de la plongée sportive et utilisent des méthodes qui ne sont pas appropriées pour des plongeurs débutants.

12. SCUBA diving requires a candidate to be an above average swimmer. All efforts should be made to ensure that Cadets choosing to undergo SCUBA instruction have their swimming abilities evaluated prior to starting a course. An acknowledgement is attached to CATO 14-10 as Annex A that must be filled out by a parent or guardian prior to a Cadet participating in any SCUBA activity. The OIC for the activity will review all forms and maintain a record of the forms in the Cadet's personnel file. Accredited diving agencies will also have their own waiver that must be completed. The OIC, in conjunction with the DI, will ensure that this process is followed.

12. Le candidat qui veut faire de la plongée sous-marine doit être un nageur au-dessus de la moyenne. Tous les efforts doivent être faits pour garantir que les cadets qui choisissent de suivre des leçons de plongée sous-marine fassent évaluer leurs aptitudes en natation avant d'entreprendre un cours. L'annexe A, jointe à l'OAIC 14-10, est un formulaire de reconnaissance devant être rempli par un parent ou un tuteur avant que le cadet participe à une activité de plongée sous-marine. L'officier responsable (O Resp) de l'activité passera en revue tous les formulaires avant de les conserver dans les dossiers personnels des cadets. Les organismes de plongée agréés feront également remplir leur propre preuve de renonciation. L'O Resp, de concert avec le MP, s'assurera du bon déroulement de cette procédure.

MEDICAL CONSIDERATIONS

13. Diving is a physically demanding activity. A diver must be in good medical health, be free of any significant respiratory or cardiovascular pathology and have good aerobic and anaerobic capability. A person over the age of 40 requires special consideration due to the prevalence of significant coronary artery disease in this age group.

14. The following are absolute contraindications to participating in diving:

a. Respiratory – asthma after age 12:

(1) chronic bronchitis,

(2) congenital blebs,

(3) scarring that may change airflow,

(4) history of pneumothorax;

ASPECTS MÉDICAUX

13. La plongée est une activité exigeante sur le plan physique. Le plongeur doit être en bonne santé et ne présenter aucune pathologie respiratoire ou cardio-vasculaire, en plus d'avoir une bonne capacité aérobie et anaérobie. Les plongeurs de plus de 40 ans nécessitent un suivi particulier en raison de la prévalence de coronaropathies importantes dans ce groupe d'âge.

14. Les pathologies suivantes constituent une contre-indication absolue à la plongée :

a. troubles respiratoires - asthme, après 12 ans :

(1) bronchite chronique,

(2) emphysème pulmonaire,

(3) cicatrisation pouvant modifier la circulation de l'air,

(4) antécédents de pneumothorax;

b. Cardiovascular – significant coronary artery disease:

(1) angina,

(2) history of myocardial infarction,

(3) cardiomyopathy,

(4) valvular heart disease,

(5) uncontrolled hypertension,

(6) abnormal conduction or rhythm disturbance;

c. Ear Nose and Throat- inner ear pathology:

(1) chronic otitis media/externa,

(2) perforated tympanic membrane,

(3) obstruction of eustachian tubes,

(4) Menieres disease.

15. The following conditions may preclude diving but are to be considered on a case by case basis:

a. significant neurologic pathology especially involving the spinal cord, diseases such as epilepsy;

b. diabetes controlled by oral hypoglycaemic/diet;

c. obesity;

d. poor aerobic capacity;

e. poor anaerobic endurance and strength;

f. history of heart surgery (cardiology consult);

g. significant hayfever/allergic rhinitis, asthma;

h. alcohol/drug abuse;

i. quiescent or remote peptic ulcer disease.

b. troubles cardio-vasculaires – coronaropathie importante :

(1) angine de poitrine,

(2) antécédents d'infarctus du myocarde,

(3) cardiomyopathie,

(4) cardiopathie valvulaire,

(5) hypertension non contrôlée,

(6) conduction anormale ou perturbations du rythme cardiaque;

c. pathologie des oreilles, du nez, de la gorge ou de l'oreille interne :

(1) otite moyenne ou externe chronique,

(2) perforation de la membrane du tympan,

(3) obstruction des trompes d'Eustache,

(4) syndrome de Ménière.

15. Les pathologies suivantes peuvent nuire à la plongée, mais elles doivent être étudiées cas par cas :

a. importantes pathologies neurologiques, particulièrement celles qui touchent la moelle épinière, maladies telles que l'épilepsie;

b. diabète contrôlé par des hypoglycémiants oraux ou par une diète;

c. obésité;

d. faible capacité aérobie;

e. faible endurance et puissance anaérobies;

f. antécédents de chirurgie cardiaque (prendre avis d'un cardiologue);

g. rhume des foins/rhinite allergique importants ou asthme;

h. alcoolisme, toxicomanie;

i. ulcère gastro-duodénal latent ou ancien.

16. Candidates with claustrophobia are precluded diving.

17. Accredited diving agencies require all candidates to be medically examined, preferably by a physician who is familiar and experienced with current diving medical standards. Diving agencies are able to provide a list of such physicians in the local area who are available to conduct such examinations. Charges for diving medical examinations shall be borne by the sponsoring organization or the cadets themselves.

ON SITE COMMAND

18. The OIC is fully responsible for the care and control of the Cadets under his or her charge. A civilian DI or DM is fully responsible for the divers upon their arrival at the dive site. In a case where there is a civilian DI or DM, it is imperative that there be close communication between the OIC and DI or DM. Decisions should, where possible, be shared between the DI or DM and OIC. It is also imperative that a civilian DI be fully briefed on this order and CATO 14-10.

SUPERVISION OF DIVING ACTIVITIES

19. During SCUBA diving activities outside of normal instruction, an accredited DI or DM from one of the organizations listed in Paragraph 8 must be utilized. A fully qualified Officer, CI or Cadet may act as the DM provided there is an “on surface” Officer in place as OIC. While not always practical, it would be ideal to have a second qualified DI or DM serving as the “on surface” supervisor.

20. The “on surface” supervisor is responsible for controlling those SCUBA divers who have not descended below the surface of the water or have resurfaced after a dive. The “on surface” supervisor maintains control over the SCUBA divers by:

a. maintaining a log to indicate dive partners as per Annex H;

b. count and record the number of teams in the water and total number of divers;

16. Les candidats souffrant de claustrophobie doivent s’abstenir de plonger.

17. Les organismes de plongée sous-marine exigent que tous les candidats subissent un examen médical, préférablement effectué par un médecin qui est familier avec les normes médicales actuelles de plongée et qui a de l’expérience en la matière. Les organismes de plongée devraient pouvoir fournir une liste de médecins de la région aptes à faire de tels examens. Les frais d’examen médicaux devraient être assumés par le répondant ou par les cadets eux-mêmes.

COMMANDEMENT SUR PLACE

18. L’officier responsable (O Resp) a l’entière responsabilité des soins et du contrôle des cadets sous sa direction. Un moniteur de plongée (MP) ou chef de plongée (CP) est entièrement responsable des plongeurs à partir de leur arrivée sur les lieux où se déroulent les activités de plongée. Lorsqu’un MP ou CP civil se trouve sur les lieux, il faut absolument qu’une bonne communication existe entre l’O Resp et le MP ou CP. Les décisions devraient, si possible, être partagées entre le MP ou CP et l’O Resp. Il est également nécessaire qu’un moniteur de plongée civil soit totalement informé du contenu de cette Ordonnance et de l’OAIC 14-10.

SUPERVISION DES ACTIVITÉS DE PLONGÉE

19. Durant les activités de plongée sous-marine en dehors des périodes d’instruction normales, on doit avoir recours aux services d’un MP ou CP agréé venant de l’un des organismes énumérés au paragraphe 8. Un officier, IC ou cadet pleinement qualifié peut agir en tant que CP à la condition qu’un officier « à la surface » se trouve sur place à titre d’officier responsable. Quoique ce ne soit pas toujours possible, l’idéal serait qu’il y ait un deuxième MP ou CP qualifié pour agir à titre de superviseur « à la surface ».

20. Le superviseur « à la surface » a la responsabilité de contrôler les plongeurs qui se trouvent à la surface de l’eau et ceux qui sont remontés à la surface après avoir plongé. Le superviseur « à la surface » doit assurer le contrôle des plongeurs en :

a. tenant un registre pour indiquer les partenaires de plongée, comme on le mentionne à l’annexe H;

b. comptant et consignant le nombre d’équipes dans l’eau et le nombre total de plongeurs;

c. ensuring both out of water and in water equipment checks have been completed;

d. recording the time divers enter the water;

e. recording divers SCUBA tank air pressure prior to the dive;

f. recording the exact time the dive partners descend;

g. recording the exact time the divers return to the surface;

h. recording the time they exit the water; and

i. completing a final count of teams and divers that corresponds with the check done at sub-paragraph b.

RESTRICTIONS ON DIVING

21. Cadets and Officers will adhere to the following restrictions:

a. diving in daylight only where the in water visibility is considered good for the operational area;

b. no diving deeper than **18 meters** (60 feet) measured at chest level when the diver is standing on the bottom;

c. no penetration dives or dives in an environment, such as a cave, wreck or under ice, where direct ascent to the surface at any time is not possible;

d. no technical diving involving mixed gas, re-breather equipment, experimental equipment or decompression dives;

e. no commercial, salvage or rescue or recovery operations; however, community projects involving the removal of garbage could be considered on a case by case basis by the DI or DM with advance approval by the area Cadet Detachment; and

c. s'assurant que les vérifications de l'équipement hors de l'eau et dans l'eau sont effectuées;

d. consignant l'heure à laquelle les plongeurs entrent dans l'eau;

e. consignant la pression d'air de la bouteille avant la plongée;

f. consignant l'heure exacte de l'immersion des partenaires de plongée dans l'eau;

g. consignant l'heure exacte du retour des plongeurs à la surface;

h. consignant l'heure de leur sortie de l'eau;

i. faisant un compte final des équipes et des plongeurs, devant correspondre à la vérification effectuée à l'alinéa b.

RESTRICTIONS CONCERNANT LA PLONGÉE

21. Les cadets et les officiers devront se conformer aux restrictions suivantes :

a. la plongée est permise le jour seulement, lorsque la visibilité dans l'eau est considérée adéquate dans la zone d'opérations;

b. aucune plongée n'est permise à plus de **18 mètres** (60 pieds) de profondeur, en mesurant à la hauteur de la poitrine lorsque le plongeur se tient debout dans le fond de l'eau;

c. aucune plongée en pénétration ou dans un milieu, comme dans une grotte, une épave ou sous la glace, où un retour direct à la surface à n'importe quel moment n'est pas possible;

d. aucune activité de plongée technique comprenant des gaz mélangés, un appareil à circuit fermé, de l'équipement d'expérimentation ou des plongées par décompression;

e. aucune opération commerciale, de sauvetage ou de récupération; toutefois, les projets communautaires incluant l'enlèvement des ordures peuvent être considérés individuellement par le MP ou le CP, avec une approbation préalable du détachement des cadets du secteur;

f. no use of non-standard recreational diving equipment.

22. DI's and DM's may impose additional restrictions depending on conditions but do not have the authority to waive any of the foregoing restrictions.

SCUBA DIVING EQUIPMENT

23. All equipment used in any SCUBA diving activity must be inspected by the DI or DM prior to use, and meet RSTC standards for recreational SCUBA diving.

PLANNING A SCUBA ACTIVITY

24. Annex G is intended to assist the OIC with the planning of a SCUBA activity. This Annex is intended as a guide and should be used in full co-operation with the designated DI or DM.

USE OF A SUPPORT VESSEL

25. Where a vessel is used to support an authorized SCUBA diving activity, the OIC must ensure that the owner or operator of the vessel carries liability insurance and any special qualification required to operate the vessel (e.g., CF Tender Charge or Coast Guard boating safety certification). The DI or DM will employ the required procedures to safely and effectively incorporate the vessel into the diving activity. The use of diving flags, buoys, onboard operating procedures and other safety concerns should be confirmed with the vessel operator prior to sailing.

ADVANCED DIVING

26. The CF and the Navy, Army Cadet and Air Cadet Leagues will not support any form of SCUBA diving beyond that specified in this CATO. Those individuals interested in pursuing SCUBA diving beyond the restrictions laid out in this order must do so personally outside of the Cadet program. Where additional SCUBA diving is organized amongst a group of individuals associated with the Cadet program, parents and guardians must be advised by

f. aucune utilisation d'équipement de plongée sportive non standard.

22. Les MP et les CP peuvent imposer des restrictions additionnelles selon les conditions, mais ne sont pas autorisés à annuler les restrictions précédentes.

ÉQUIPEMENT DE PLONGÉE SOUS-MARINE

23. Pour une activité de plongée sous-marine, l'équipement doit faire l'objet d'une inspection par le MP ou le CP avant son utilisation, et doit rencontrer les normes du RSTC pour des fins de plongée sportive sous-marine.

PLANIFICATION D'UNE ACTIVITÉ DE PLONGÉE SOUS-MARINE

24. L'annexe G vise à aider l'officier responsable (O Resp) lors de la planification d'une activité de plongée sous-marine. Cette annexe est destinée à servir de guide et doit être utilisée en collaboration étroite avec le MP ou le CP désigné.

UTILISATION D'UN NAVIRE DE SOUTIEN

25. Lorsqu'un navire est utilisé pour appuyer une activité de plongée sous-marine autorisée, l'officier responsable (O Resp) doit s'assurer que le propriétaire et exploitant du navire possède une assurance-responsabilité et les qualifications particulières requises pour exploiter le navire (p. ex., certification de Prise en charge de navire auxiliaire des FC ou de sécurité nautique de la Garde côtière). LE MP ou le CP verra à utiliser les procédures requises afin d'incorporer prudemment et efficacement l'emploi du navire dans l'activité de plongée. Avant d'appareiller, il doit y avoir entente avec l'exploitant du navire quant à l'utilisation de pavillons de plongée, de bouées, de procédures de manœuvre de bord et autres questions de sécurité.

PLONGÉE DE NIVEAU AVANCÉ

26. Les Forces canadiennes ainsi que la Ligue navale, des cadets de l'Armée et des cadets de l'Air ne donneront pas leur appui à toute forme de plongée sous-marine dépassant celle qui a été spécifiée dans la présente ordonnance. Les individus intéressés à poursuivre leurs activités en plongée sous-marine, qui dépasseraient les restrictions spécifiées dans cette Ordonnance, doivent le faire sur une base personnelle en dehors du programme

means of a waiver, as provided in CATO 14-10 Annex B, that neither the CF or Cadet Leagues accept any responsibility for the activity.

des cadets. Lorsque des activités de plongée sous-marine additionnelles sont organisées parmi un groupe d'individus associés au programme des cadets, les parents et les tuteurs doivent être mis au courant, au moyen d'un avis semblable à celui qui est fourni à l'annexe B de l'OAIC 14-10, que ni les FC ni les ligues des cadets n'acceptent la responsabilité de telles activités.

EMERGENCY PROCEDURES

27. The DI or DM will:

a. provide a first aid kit;

b. prepare an emergency communications plan;

c. prepare an emergency transportation and route plan; and

d. where possible, but only if he/she was specifically trained and qualified to do so, provide an emergency oxygen delivery system.

28. The following CF organizations can provide 24 hours/day emergency medical advice related to diving:

a. Fleet Diving Unit (Atlantic), at (902) 460-1011, extension 1353 during normal working hours and 1339 outside normal working hours;

b. Fleet Diving Unit (Pacific), at (250) 363-2379, day and night.

29. The following company can provide assistance to SCUBA divers in the form of 24 hour medical advice and contacts for a fee (to be borne by the sponsoring organization or cadets themselves):

Divers Alert Network (DAN)
1-800-446-2671
www.diversalertnetwork.org

Note: English only information.

PROCÉDURES D'URGENCE

27. Le MP ou le CP :

a. fournira une trousse de premiers soins;

b. préparera un plan de communication d'urgence;

c. préparera un moyen de transport d'urgence et un plan de l'itinéraire;

d. quand c'est possible, mais seulement si celui-ci a été précisément formé et qualifié à cette fin, fournira un système respiratoire de secours.

28. Les organismes des FC suivants offre un service de consultations médicales qui ont trait à la plongée sous-marine :

a. l'unité de plongée de la Flotte (Atlantique), au (902) 460-1011, poste 1353 pendant les heures de bureau et 1339 en dehors des heures de bureau;

b. l'unité de plongé de la Flotte (Pacifique), au (250) 363-2379, en tout temps.

29. L'entreprise suivante peut procurer de l'assistance aux plongeurs sous la forme d'un service de conseils et de contacts médicaux 24 heures sur 24, moyennant certains frais (aux frais du répondant ou des cadets eux-mêmes) :

Divers Alert Network (DAN)
1-800-446-2671
www.diversalertnetwork.org

Nota : Renseignements en anglais seulement

ANNEX A

DECLARATION OF SWIMMING ABILITY

1. Prior to participating in any on-water activities, where the potential for capsize or falling overboard is high (i.e. dinghy sailing, canoeing or kayaking), each cadet's swimming ability and knowledge of water hazards shall be assessed. This assessment will allow the instructors to identify the strengths and weaknesses of the group.

2. Prior to the start of the activity, the instructor will ask the cadet to describe his/her swimming ability using the following descriptors:

a. Non-swimmer and uncomfortable in and around the water;

b. Non-swimmer but comfortable in and around the water when wearing a PFD;

c. Some swimming ability, comfortable in and around the water, capable of swimming short distances and treading water for short periods of time without the assistance of a PFD;

d. Skilled swimmer, capable of swimming long distances and treading water for long periods of time without the assistance of a PFD.

3. The instructor shall also ensure that each cadet is aware of hazards in, on, under and around the water and any other hazards specific to the training area (i.e. dams, current, etc) and how to react when in trouble.

ANNEXE A

DÉCLARATION DES APTITUDES EN NATATION

1. Avant de participer à toute activité nautique où les chances de chavirer ou de passer par-dessus bord sont élevées (c.-à-d. navigation sur dériveur, en canoë ou en kayak), les aptitudes en natation de chaque cadet ainsi que leur connaissance des dangers doivent être évaluées. Cette évaluation permettra aux instructeurs d'identifier les forces et faiblesses du groupe.

2. Avant le début de l'activité, l'instructeur demandera au cadet de décrire ses aptitudes en natation selon l'une des descriptions suivantes:

a. non-nageur et inconfortable dans ou près de l'eau;

b. non-nageur mais confortable dans ou près de l'eau lorsqu'un VFI est porté;

c. certaines aptitudes en natation, confortable dans ou près de l'eau, capable de nager de courtes distances et de nager debout pendant une courte période sans l'aide d'un VFI;

d. bon nageur, capable de nager de longues distances et de nager debout pendant une longue période sans l'aide d'un VFI.

3. L'instructeur devra aussi s'assurer que chaque cadet est conscient des dangers dans, sur, sous et autour de l'eau, des autres dangers spécifiques à la zone d'entraînement (p. ex. barrage, courant, etc.) ainsi que de la façon de réagir lorsqu'on est en détresse.

ANNEX B

WEATHER – SAFETY GUIDE FOR SAILING ACTIVITIES

ANNEXE B

CONDITIONS ATMOSPHÉRIQUES – GUIDE DE SÉCURITÉ POUR LES ACTIVITÉS À LA VOILE

Wind Chart						
Beaufort	**Wind Speed***		**Wave Height**	**Description**	**Appearance**	**Guidelines**
	Knots	**Km/h**				
0	0	0	0	Calm	Like a mirror.	Less experienced sailors can go out and skip, with supervision of an experienced sailor. Sailors with White Sail Levels 1 to 3 can skip when winds are equal to or less than 15 km/h.
1	1-3	1-5	0	Light Air	Small ripples in the water, no crests.	
2	4-6	6-11	0.2 m	Light Breeze	Small wavelets, crests have glassy appearance.	
3	7-10	12-19	0.6 m	Gentle Breeze	Large wavelets, crests begin to break, scattered white caps.	
4	11-16	20-29	1 m	Moderate Breeze	Small waves, numerous white caps.	Less experienced sailors can act as crew. Only experienced sailors should skip. Sailors with a CYA Bronze IV and V level can skip when winds are equal or less than 25 km/h.
5	17-21	30-39	1.8 m	Fresh Breeze	Moderate waves, many white caps.	Only experienced sailors should go out on the water. They should be closely supervised by a safety boat. An order should be given to go back to shore whenever the winds reach 20 knots. However, sailors with CYA Silver VI level can skip when winds are equal to or less than 35 km/h.
					Pleasure craft warnings are made when winds from 20 to 33 knots are forecasted.	
6	22-27	40-50	3 m	Strong Breeze	Large waves, constant white caps, some spray.	Only experienced sailors can go on the water, and only in protected areas. The safety boat must insure close supervision.

Guide de navigation						
Force du vent	**Vitesse**		**Hauteur de la vague**	**Description**	**État de la mer**	**Guide de navigation**
	Nœuds	**Km/h**				
0	0	0	0	Calme	Comme un miroir.	Les marins les moins expérimentés peuvent sortir et barrer sous la direction d'autrui. Les marins voile blanche de niveau I à III de l'ACY peuvent barrer par un vent jusqu'à concurrence de 15 km/h.
1	1-3	1-5	0	Très légère brise	Quelques rides en écaille de poisson, mais sans aucune écume.	
2	4-6	6-11	0,2 m	Légère brise	Vaguelettes courtes aux crêtes d'apparence vitreuse, ne déferlant pas.	
3	7-10	12-19	0,6 m	Petite brise	Très petites vagues; les crêtes commencent à déferler, les moutons apparaissent.	
4	11-16	20-29	1 m	Jolie brise	Petites vagues s'allongeant, moutons nombreux.	Les marins les moins expérimentés peuvent servir d'équipiers. Seuls les marins expérimentés devraient barrer. Les marins voile de bronze de niveau IV ou V de l'ACY peuvent barrer par un vent jusqu'à concurrence de 25 km/h.
5	17-21	30-39	1,8 m	Bonne brise	Vagues modérées, nettement allongées; beaucoup de moutons; embruns.	Seuls les marins expérimentés devraient sortir. Ils devraient être surveillés de près par le bateau de sécurité. Tous les bateaux devraient être rappelés et revenir à quai lorsque le vent atteint 20 nœuds, sauf dans le cas décrit ci-dessous. Les marins voile d'argent de niveau VI de l'ACY peuvent barrer par vent jusqu'à concurrence de 35 km/h.
					On émet des avertissements pour la navigation de plaisance lorsqu'on prévoit un vent soutenu de 20 à 33 nœuds.	
6	22-27	40-50	3 m	Vent frais	Des lames se forment, les crêtes d'écume blanche s'étendent; davantage d'embruns.	Seuls des marins expérimentés devraient être autorisés à naviguer et ce, uniquement dans des eaux protégées (p. ex., sous le vent d'un brise-lame); le bateau de sécurité devant assurer une surveillance très étroite.

Wind Chart						
Beaufort	**Wind Speed***		**Wave Height**	**Description**	**Appearance**	**Guidelines**
	Knots	**Km/h**				
7	28-33	51-61	4m	Near Gale	Mounting sea, foam blown in streaks down wind.	Sailing is forbidden, in all conditions.
8	34-40	62-74	5.5 m	Gale	High waves, crests break into spindrift, foam blown in streaks.	Sailing is forbidden, in all conditions.
					Gust warnings are made when winds from 34 to 47 knots are forecasted.	
9	41-47	76-87	7 m	Strong Gale	High waves, dense foam and spray, reduced visibility.	Sailing is forbidden, in all conditions.
10	48-55	88-102	9 m	Storm	Very high waves, visibility impaired, heavy sea roll. Surface generally white.	Sailing is forbidden, in all conditions.
					Storm warnings are made when winds from 48 to 63 knots are forecasted.	
11	56-63	103-118	11 m	Violent Storm	Exceptionally high waves (small and medium-sized crafts can be hidden by the waves) Poor visibility.	Sailing is forbidden, in all conditions.
12	64-71	119	14 m	Hurricane		Sailing is forbidden, in all conditions.

Guide de navigation						
Force du vent	**Vitesse**		**Hauteur de la vague**	**Description**	**État de la mer**	**Guide de navigation**
	Nœuds	**Km/h**				
7	28-33	51-61	4 m	Grand frais	La mer grossit en lames déferlantes; l'écume commence à être soufflée en traînées dans le lit du vent.	Il est interdit de naviguer, quelles que soient les conditions.
8	34-40	62-74	5,5 m	Coup de vent	Les lames atteignent une hauteur de l'ordre de 5m; tourbillons d'écume à la crêtes de lames, traînées d'écume. Des avis de coup de vent sont émis lorsque l'on prévoit un vent soutenu de 34 à 47 nœuds.	Il est interdit de naviguer, quelles que soient les conditions.
9	41-47	76-87	7 m	Fort coup de vent	Grosses lames déferlant en rouleaux, tourbillons d'embruns arrachés aux lames, nettes traînées d'écume; visibilité réduite par les embruns.	Il est interdit de naviguer, quelles que soient les conditions.
10	48-55	88-102	9 m	Tempête	Très grosses lames déferlant; écume en larges bancs formant des traînées blanches; visibilité réduite par les embruns. Des avis de tempête sont émis lorsque l'on prévoit un vent soutenu de 48 à 63 nœuds.	Il est interdit de naviguer, quelles que soient les conditions.
11	56-63	103-118	11 m	Violente tempête	Lames déferlantes d'une hauteur exceptionnellement (les petites embarcations et les bâtiments moyens peuvent être cachés par les vagues); mer couverte d'écume blanche; visibilité réduite.	Il est interdit de naviguer, quelles que soient les conditions.
12	64-71	119	14 m	Ouragan		Il est interdit de naviguer, quelles que soient les conditions.

ANNEX C

WEATHER – SAFETY GUIDE FOR CANOE / KAYAK ACTIVITIES

ANNEXE C

CONDITIONS ATMOSPHÉRIQUES – GUIDE DE SÉCURITÉ POUR LES ACTIVITÉS EN CANOT/KAYAK

Wind Chart for Paddlers in the Canadian Cadet Movement						
Terminology	**Wind Speed***		**Wave Height (large body of water)**	**Description**	**Appearance**	**Guidelines**
	Knots	**Km/h**				
No winds	0	0	0	Calm	Like a mirror.	Good training wind conditions, especially for beginners and solo paddlers.
Light winds	1-3	1-5	0	Light Air	Small ripples in the water, no crests.	
Light winds	4-6	6-11	0.2 m	Light Breeze	Small wavelets, crests have glassy appearance.	
Light winds	7-10	12-19	0.6 m	Gentle Breeze	Large wavelets, crests begin to break, scattered white caps.	Not good training conditions but acceptable for tripping.
Light winds	11-16	20-29	1 m	Moderate Breeze	Small waves, numerous white caps.	No solo canoeing recommended, paddling partners should be paired so that there is at least one good, strong peddler in each craft. Entire classes of beginners should stay close to shore.
Moderate winds	17-21	30-39	1.8 m	Fresh Breeze	Moderate waves, many white caps.	All paddlers head for shore in a safe and organized manner, a group can continue paddling close to shore under close supervision, mostly if protection is present.
Strong winds/ Small craft warnings					Pleasure craft warnings are made when winds from 20 to 33 knots are forecasted.	No paddling except for rescue boat if necessary.

Guide de navigation pour le canot et le kayak						
Terminologie	**Vitesse du vent ***		**Hauteur de la vague**	**Description**	**État de la mer**	**Guide de navigation**
	Nœuds	**Km/h**				
Pas de vent	0	0	0	Calme	Comme un miroir.	Bonnes conditions pour l'apprentissage, spécialement pour les débutants et les pagayeurs en solo.
Vents légers	1-3	1-5	0	Très légère brise	Quelques rides en écaille de poisson, mais sans aucune écume.	
Vents légers	4-6	6-11	0,2 m	Légère brise	Vaguelettes courtes aux crêtes d'apparence vitreuse, ne déferlant pas.	
Vents légers	7-10	12-19	0,6 m	Petite brise	Très petites vagues; les crêtes commencent à déferler, les moutons apparaissent.	Mauvaises conditions pour l'apprentissage, mais acceptables pour les excursions.
Vents légers	11-16	20-29	1 m	Jolie brise	Petites vagues s'allongeant, moutons nombreux.	Canotage en solo non-recommandé. Les pagayeurs devraient être en paires en s'assurant qu'au moins un des deux membres de l'équipe est expérimenté. Les groupes de débutants devraient demeurer près de la côte.
Vents modérés	17-21	30-39	1,8 m	Bonne brise	Vagues modérées, nettement allongées; beaucoup de moutons; embruns.	Tous les pagayeurs devraient se diriger vers la côte dans un endroit sécuritaire, de façon organisée. Un groupe peut continuer à pagayer près de la côte, sous haute supervision, spécialement si l'endroit est protégé.
Vents forts/Avertis-sement aux petites embarcations					On émet des avertissements pour la navigation de plaisance lorsqu'on prévoit un vent soutenu de 20 à 33 nœuds.	Pas de canotage, excepté pour les embarcations de sécurité, si nécessaire.

Wind Chart for Paddlers in the Canadian Cadet Movement						
Terminology	**Wind Speed***		**Wave Height (large body of water)**	**Description**	**Appearance**	**Guidelines**
	Knots	**Km/h**				
Strong winds/ Small craft warnings	22-27	40-50	3 m	Strong Breeze	Large waves, constant white caps, some spray.	No paddling, a powerboat may be used for rescues if necessary.
Gale warnings	28-33	51-61	4m	Near Gale	Mounting sea, foam blown in streaks down wind.	No paddling, no powerboats.
Storm warnings	34-40	62-74	5.5 m	Gale	High waves, crests break into spindrift, foam blown in streaks.	No paddling, no powerboats.

* One knot is one nautical mile per our, equivalent to 1.85 Km/H or 1.1 mpr

Guide de navigation pour le canot et le kayak						
Terminologie	**Vitesse du vent ***		**Hauteur de la vague**	**Description**	**État de la mer**	**Guide de navigation**
	Nœuds	**Km/h**				
Vents forts/Avertis-sement aux petites embarcations	22-27	40-50	3 m	Vent frais	Des lames se forment, les crêtes d'écume blanche s'étendent; davantage d'embruns.	Pas de canotage. Une embarcation de sécurité à moteur peut être utilisée, si nécessaire.
Avertisse-ment de coups de vent	28-33	51-61	4 m	Grand frais	La mer grossit en lames déferlantes; l'écume commence à être soufflée en traînées dans le lit du vent.	Pas de canotage, pas d'embarcations moteur sur le plan d'eau.
Avertisse-ment d'orages	34-40	62-74	5,5 m	Coup de vent	Les lames atteignent une hauteur de l'ordre de 5 m; tourbillons d'écume à la crête de lames, traînées d'écume.	Pas de canotage, pas d'embarcations moteur sur le plan d'eau.

* Un nœud est un mille nautique à l'heure, ce qui équivaut à 1.85 Km/h ou 1.1 mpr

ANNEX D

SCUBA ACTIVITY PLANNING SHEET

1. **Pre-briefing**

   a. Care of the environment (respect aquatic life, remind divers how to avoid damaging aquatic life or disturbing silt through proper flotation, reminder about not touching or taking anything)

   b. Layout (depth, topography etc.).

   c. Conditions (current, visibility temp. etc.).

   d. Points of interest (historic or natural etc.).

   e. Unusual hazards (wires, weeds etc.).

   f. Off limit areas.

2. **Role of Dive Master**

   a. Where you will be.

   b. What you will be doing.

   c. How to identify you.

   d. How to get your attention.

3. **Entry and Exit Procedures**

   a. Recommended procedures to follow given conditions.

4. **Dive Procedures**

   a. Recommended course to follow.

   b. Recommended maximum depth and time.

   c. Tips on how to avoid common problems.

   d. Recommended air reserve and safety stop.

ANNEXE D

FEUILLE DE PLANIFICATION D'UNE ACTIVITÉ DE PLONGÉE SOUS-MARINE

1. **Instructions préparatoires**

   a. Soin de l'environnement (respect de la vie aquatique; rappeler aux plongeurs la façon d'éviter de causer des dommages à la vie aquatique ou de déranger le limon grâce à une flottaison adéquate; rappeler de ne toucher à rien et de ne rien prendre)

   b. Plan (profondeur, topographie, etc.).

   c. Conditions (courant, visibilité, température, etc.).

   d. Points d'intérêt (historique ou naturel, etc.).

   e. Dangers inhabituels (fils, algues, etc.).

   f. Régions interdites.

2. **Rôle du chef de plongée**

   a. Où vous vous trouverez.

   b. Ce que vous ferez.

   c. Comment vous reconnaître.

   d. Comment attirer votre attention.

3. **Procédures d'entrée et de sortie**

   a. Procédures recommandées pour respecter les conditions requises.

4. **Procédures de plongée**

   a. Cours recommandé à suivre.

   b. Maximum de profondeur et de temps recommandé.

   c. Conseils pour éviter des problèmes communs.

   d. Réserve d'air et arrêt de sécurité recommandés.

5. **Emergency Procedures**

   a. What to do in case of an emergency.

   b. What to do in case of buddy separation.

   c. What to do if low on air.

6. **Signal Review**

   a. Signals between you and divers.

   b. Review signals that buddy teams will use.

7. **Roster and Buddy Check**

   a. As per Annex B, ensure that all divers are counted both before and after a dive.

   b. Remind the divers that they are responsible for a complete pre-dive safety check with their buddies. The following is a PADI recommended pre-dive check:

Begin With Review And Friend

a. **B (Buoyancy)**
   - ✓ Buoyancy control device (BCD) secure and functioning properly?
   - ✓ Low pressure inflator attached (dry suit BCD)?
   - ✓ BCD appropriately filled for entry?
   - ✓ Buddy familiar with operation?
   - ✓ Tank secure?

b. **W (Weights)**
   - ✓ Amount of weight appropriate?
   - ✓ System free and clear for emergency release?

c. **R (Releases)**
   - ✓ All buckles and releases functional?
   - ✓ Locate release without looking?
   - ✓ Buddy familiar with operation?

5. **Procédures d'urgence**

   a. Quoi faire en cas d'urgence.

   b. Quoi faire en cas d'éloignement d'un copain.

   c. Quoi faire en cas d'une baisse d'air.

6. **Révision des signaux**

   a. Signaux entre vous et les plongeurs.

   b. Passer en revue les signaux que les équipes utiliseront.

7. **Liste des présences et vérification des copains**

   a. Comme l'indique l'Annexe B, s'assurer de compter tous les plongeurs avant et après la plongée.

   b. Rappeler aux plongeurs qu'ils sont responsables d'effectuer un contrôle de sécurité avec leurs copains avant la plongée. Le contrôle suivant qui doit avoir lieu avant la plongée est recommandé par la PADI (traduction libre) :

(aucun équivalent en français)

a. **Flottaison**
   - ✓ Compensateur de flottaison (CDF) bien attaché et en bon état?
   - ✓ Gonfleur pour la basse pression attaché (combinaison étanche de flottaison)?
   - ✓ CDF bien rempli pour l'entrée?
   - ✓ Copain au courant de la manœuvre?
   - ✓ Bouteille bien attachée?

b. **Lest**
   - ✓ Quantité de lest adéquate?
   - ✓ Ceinture non obstruée et prête à être retirée d'urgence?

c. **Largueurs**
   - ✓ Boucles et largueurs en bon état?
   - ✓ Localisation des largeurs sans regarder?
   - ✓ Copain au courant de la manœuvre?

d. **A (Air)**

- ✓ Sufficient air for dive?
- ✓ Valve turned on all the way?
- ✓ Alternate air source properly located?
- ✓ Familiar with buddy's alternate air source?
- ✓ Agree on reserve air pressure?

e. **F (Final OK)**

- ✓ General check over of buddy?
- ✓ Enter water

f. Confirm all divers have checked their air supply prior to entering the water.

g. This annex is intended as a guide only, a DI or DM may choose to implement a different system.

d. **Air**

- ✓ Suffisamment d'air pour la plongée?
- ✓ Soupape tournée complètement?
- ✓ Source auxiliaire d'air repérée?
- ✓ Connaître la source auxiliaire d'air de mon copain?
- ✓ Être d'accord par rapport à la réserve de pression d'air?

e. **OK final**

- ✓ Vérification générale de mon copain?
- ✓ Entrée dans l'eau

f. Confirmer que tous les plongeurs ont vérifié leur approvisionnement d'air avant d'entrer dans l'eau.

g. Cette annexe sert à titre de guide seulement; un MP ou un CP peut choisir de mettre un autre système en pratique.

ANNEX E

DIVE ACTIVITY CONTROL LOG

ANNEXE E

REGISTRE DE CONTRÔLE DE L'ACTIVITÉ DE PLONGÉE

DATE: _____ **OIC:** _____

ACTIVITY: _____ **DIVEMASTER:** _____

NO. OF TEAMS: _____ **NO. OF DIVERS:** _____

Team No.	No. of Divers in Team	Dive Partners	Equipment Check	Start Tank Pressure	Time Down	Time Up	Final Tank Pressure	No. of Divers Up

Retain this log at the cadet unit for a period of three years.

DATE: _____ **O RESP:** _____

ACTIVITÉ: _____ **CP:** _____

N^{BRE} D'ÉQUIPES: _____ **N^{BRE} DE PLONGEURS:** _____

N° de l'équipe	N^{bre} de plongeurs dans l'équipe	Partenaires de plongée	Vérification de l'équipement	Pression de la bouteille à l'entrée	Heure d'immersion	Heure de remontée	Pression de la bouteille à la sortie	N^{bre} de plongeurs remontés

Conserver le présent registre à l'unité des cadets pendant une période de 3 ans.