



## ROYAL CANADIAN AIR CADETS

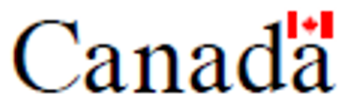
# PROFICIENCY LEVEL TWO QUALIFICATION STANDARD AND PLAN

(ENGLISH)

(Supersedes A-CR-CCP-802/PG-001 dated 2015-09-01)

Cette publication est disponible en français sous le numéro A-CR-CCP-802/PG-002.

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## **FOREWORD AND PREFACE**

1. **Issuing Authority.** This Qualification Standard and Plan (QSP) A-CR-CCP-802/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 51-01, *Air Cadet Program Outline*, and 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 A-P9-050 Series, *Canadian Forces Individual Training and Education System*, with modifications to meet the needs of the Canadian Cadet Organization (CCO).
3. **Purpose of the QSP.** The QSP is to be used by Royal Canadian Air Cadet Squadrons to conduct Proficiency Level Two, as outlined in CATO 11-04, *Cadet Program Outline* and CATO 51-01, *Air Cadet Program Outline*.
4. **Suggested Changes.** Suggested changes to this document may be sent directly to [cadettraining@canada.ca](mailto:cadettraining@canada.ca).

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## CHAPTER 1

### GENERAL

#### AIMS

1. The aim of the Proficiency Level Two Program is to provide an Air Cadet with the basic theoretical knowledge and practical experience required to participate in cadet squadron activities as a team member.

#### PROGRAM DESIGN

2. The Proficiency Level Two Program has been designed:
  - a. assuming that the majority of second year cadets are between 13 and 14 years of age;
  - b. assuming that the majority of cadets have successfully completed Proficiency Level One;
  - c. using age-appropriate learning strategies;
  - d. by providing a programming mix consisting of mandatory and complementary training;
  - e. to include training which is experiential and skill-based, with a lesser focus on theoretical knowledge; and
  - f. assuming that learning will take place through a combination of programmed periods of instruction, unstructured discussions, teachable moments, and coaching / mentoring opportunities.
3. Each Proficiency Level is composed of performance objectives (POs) subdivided into enabling objectives (EOs).

#### PERFORMANCE OBJECTIVES

4. PO numbers are usually made up of three digits:
  - a. The first digit indicates the proficiency level (eg, 'X' represents Proficiency Levels One to Four, '1' represents Proficiency Level One, '2' represents Proficiency Level Two, etc.).
  - b. The second and third digits indicate the topic area (eg, '00' represents Positive Social Relations for Youth, '01' represents Citizenship, '02' represents Community Service, etc.).
5. EO numbers are usually made up of six digits (eg, EO M103.01):
  - a. The first digit is either an 'M', which indicates mandatory training, or a 'C', which indicates complementary training.
  - b. The second, third and fourth digits indicate the PO as per para 4.
  - c. The fifth and sixth digits indicate the specific EO number (eg, EO M103.01 is the first mandatory EO in Proficiency Level One leadership).
  - d. Some EOs have a seventh digit, which indicates there is a selection of EOs to choose from (eg, EOs MX01.01A, MX01.01B, MX01.01C, etc. indicates squadrons can choose any one of these EOs to satisfy the requirements of mandatory Citizenship training).
6. Each PO has been developed to contribute directly to the program aim and participant outcomes detailed in CATO 11-03, *Cadet Program Mandate*. The following are summaries of the POs common to all elements of the CP (allocated POs numbered X01 to 211) and the POs specific to the Proficiency Level Two Program (allocated POs numbered 230 to 290):

- a. **Citizenship.** PO X01 – Participate in Citizenship Activities. The aim of this PO is to introduce cadets to various aspects of being a good Canadian citizen through a range of fun, interesting and challenging activities.
- b. **Community Service.** PO X02 – Perform Community Service. The aim of this PO is to encourage cadets to be active citizens through participation in a community service activity as a member of a team.
- c. **Leadership.** PO 203 – Demonstrate Leadership Attributes Within a Peer Setting. The aim of this PO is to introduce cadets to the ways peer leaders are able to influence the behaviour of their group.
- d. **Personal Fitness and Healthy Living.** PO X04 – Track Participation in Physical Activities. The aim of this PO is to encourage cadets to live a healthy, active lifestyle by meeting the *Canadian Physical Activity Guidelines* and *Canadian Sedentary Behaviour Guidelines* for youth.
- e. **Physical Activities.** PO X05 – Participate in Physical Activities. The aim of this PO is for cadets to have fun participating in physical activities.
- f. **Air Rifle Marksmanship.** PO 206 – Fire the Cadet Air Rifle During Recreational Marksmanship. The aim of this PO is to develop the cadets' marksmanship abilities through participation in recreational marksmanship.
- g. **General Cadet Knowledge.** PO 207 – Serve in an Air Cadet Squadron. The aim of this PO is to provide cadets with information on the opportunities inherent in the air cadet program, and provide them with skills and knowledge that allow them to integrate successfully within the cadet organization.
- h. **Drill and Ceremonial.** PO 208 – Execute Drill as a Member of a Squad. The aim of this PO is to provide cadets with drill movements designed to improve the efficiency of a squad on the march.
- i. **Biathlon.** PO 211 – Participate in Competitive Summer Biathlon Activities. The aim of this PO is to provide cadets with an opportunity to enhance individual marksmanship skills and personal fitness while introducing cadets to the sport of biathlon.
- j. **Aviation History.** PO 230 – Discuss Canadian Aviation History. The aim of this PO is to engage cadets in specific aspects of the history of aviation in Canada.
- k. **Principles of Flight.** PO 231 – Explain Principles of Flight. The aim of this PO is to ensure cadets understand the rudiments of how aircraft fly.
- l. **Propulsion.** PO 232 – Identify Characteristics of Piston-Powered Aircraft. The aim of this PO is to introduce cadets to propulsion systems used in aviation.
- m. **Aerospace.** PO 240 – Participate in Aerospace Activities. The aim of this PO is to augment the cadets' notions of aerospace.
- n. **Aerodrome Operations.** PO 260 – Participate in Aerodrome Operations Activities. The aim of this PO is to augment the cadets' knowledge of the operations necessary at most aerodromes and to further stimulate an interest in ground-based aviation opportunities.
- o. **Aircraft Manufacturing and Maintenance.** PO 270 – Discuss Aircraft Manufacturing and Maintenance. The aim of this PO is to introduce cadets to specialized aspects of the aviation industry.
- p. **Aircrew Survival.** PO 290 – Participate in a Field Exercise. The aim of this PO is to further develop the cadets' survival skills.

**TRAINING PREREQUISITES**

7. To participate in the Proficiency Level Two Program, youths must be members of a cadet squadron, as specified in A-CR-CCP-950/PT-00, *Queen's Regulations and Orders for the Canadian Cadet Organization*, Article 4.01.

**USE OF THE QSP**

8. 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 for Proficiency Level Two. This QSP shall also be used by D Cdts & JCR as the primary reference for validation of Proficiency Level Two training.

9. Proficiency Level Two shall be conducted using this QSP as the training control document in conjunction with A-CR-CCP-802/PF-001, *Royal Canadian Air Cadets Proficiency Level Two Instructional Guides*.

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## CHAPTER 2

### TRAINING MANAGEMENT DETAILS

#### RESPONSIBLE AGENCY AND TRAINING ESTABLISHMENTS

1. The Managing Authority for the Air Cadet Proficiency Level Program is D Cdt & JCR. The conduct of said program is the responsibility of the Regional Cadet Support Units (RCSUs) through authorized Training Establishments (TEs). These TEs include:
  - a. Royal Canadian Air Cadet Squadrons (RCACS); and
  - b. Technical TEs, such as:
    - (1) Regional Cadet Air Operations (RCAOPS); and
    - (2) Other zone, detachment or regional TEs as authorized by the RCSU Commanding Officer (CO).

#### TRAINING DETAILS

2. In accordance with CATOs 11-04, *Cadet Program Outline* and 51-01, *Air Cadet Program Outline*, the Proficiency Level Program is conducted between 1 September and 30 June of each training year through a combination of 30 training sessions and 10 supported training days as detailed in Annex A.
3. The Proficiency Level Program is divided into two compulsory components that must be completed by all cadets. These components are:
  - a. **Mandatory Training.** Mandatory training is a scheme of activities that is requisite for squadrons, and in some instances, specialized TEs, to conduct and for cadets to accomplish in order to complete the Proficiency Level Program; and
  - b. **Complementary Training.** Complementary training is a scheme of activities that is requisite for squadrons, and in some instances specialized TEs, to conduct and for cadets to accomplish in order to complete the Proficiency Level Program. These activities complement mandatory activities and form an integral part of the Proficiency Level Program. COs have the discretion to choose activities from a range of possibilities, thus allowing them flexibility to tailor the Proficiency Level Program to match the squadron's interests and resources.
4. **Period Allocation.** Periods are 30 minutes in duration with some periods allocated to be delivered during a mandatory ACS exercise. A detailed period allocation, including details on training days / weekend, is provided at Annex A, and scheduling guidelines are located at Annex B.
5. **Training Days / Weekends.**
  - a. The planning and conduct of training days is the responsibility of the squadron. Day training shall be conducted at the squadron parade location or, where suitable facilities do not exist at the squadron parade location, within the local community.
  - b. The conduct of the familiarization flight and elemental day are normally the responsibility of Technical TEs (RCAOPS). The planning of these activities is to be done in conjunction with the Area Cadet Detachment / RCSU and RCAOPS.
  - c. In accordance with CATO 11-04, *Cadet Program Outline*, weekend training shall normally be conducted within three hundred kilometres of the squadron parade location.
  - d. Where support of mandatory or complementary days / weekends is required, requests shall be forwarded to the appropriate RCSU. Refer to CATO 51-01, *Air Cadet Program Outline*, and regional orders for amplified information on support available from RCSUs.

- e. Training days and weekends shall be structured, unless otherwise specified in the individual Proficiency Level QSP, to include cadets from all levels of the Proficiency Level Program.

6. **Training Capacity.** The training capacity is limited to the ability of the squadron to meet supervision requirements in accordance with CATO 13-12, *Supervision of Cadets*, and in some cases, to established quotas.

7. **Training Staff Requirements.**

- a. Squadron Training Officer (Trg O):

| RANK | MOSID    | NUMBER | QUALIFICATION                                                                                                                                                                                                                                      |
|------|----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Capt | 00232-03 | 1      | <p>Minimum:</p> <p>Captain Qualification; or<br/>CIC Intermediate Officer Qualification</p> <p>Preferred:</p> <p>CIC Training Officer (Corps / Squadron) Qualification;<br/>and<br/>CIC Occupational Specialty Senior Instructor Qualification</p> |

- b. Proficiency Level Two Course Officer (PL1 Crse O):

| RANK     | MOSID    | NUMBER | QUALIFICATION                                                                                                                                                                                                                                                                                                                                                               |
|----------|----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lt / 2Lt | 00232-03 | 1      | <p>Minimum:</p> <p>Basic Officer Qualification; or<br/>CIC Basic Military Officer Qualification and Basic<br/>Military Occupational Qualification.</p> <p>Preferred:</p> <p>Military Occupation Course (Air); or<br/>CIC Basic Military Officer Qualification (Air).</p> <p><b>Note:</b> This position may also be filled by an OCdt, should<br/>circumstances warrant.</p> |

- c. Instructors:

| RANK                    | MOSID | NUMBER             | QUALIFICATION                                                                                                                                                                                                              |
|-------------------------|-------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cadet FSgt<br>and above | N/A   | 1 per<br>10 Cadets | <p>Minimum:</p> <p>Completion of Proficiency Level Four Program</p> <p>Preferred:</p> <p>CSTC specialties appropriate for activity requirements<br/>(eg, Survival Instructor to instruct aircrew survival<br/>PO 190).</p> |

8. **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.) and by local circumstances. It is recommended that cadet specialist instructors be used in the delivery of specialty training where practical. The technical specialists that could support Proficiency Level Two are:

- a. Required Specialist Instructors:
  - (1) Unit Cadet Conflict Management Advisor (UCCMA) to coordinate training delivery and learning reinforcement for PO 100; and
  - (2) Range Safety Officer (RSO) in support of POs 206 and 211; and
- b. Possible Cadet Specialist Instructors:
  - (1) Fitness and Sports Instructor(s) as available in support of POs X04 and X05;
  - (2) Air Rifle Marksmanship Instructor(s) as available in support of POs 206 and 211;
  - (3) Drill and Ceremonial Instructor(s) as available in support of PO 208;
  - (4) Advanced Aviation Instructor(s), Glider Pilots and Power Pilots as available in support of POs 231 and 232;
  - (5) Advanced Aerospace Instructor(s) as available in support of PO 240;
  - (6) Aerodrome Operations specialist(s) as available in support of PO 260;
  - (7) Aircraft Manufacturing and Maintenance specialist(s) as available in support of PO 270; and
  - (8) Survival Instructor(s) as available in support of PO 290; and
- c. guest speaker(s) as required.

9. **Resource Requirements.** RCSU COs are responsible for ensuring that required equipment and supplies are available. A list of material required to conduct the training is located at Chapter 2, Annex C.

## TRAINING ADMINISTRATION

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

11. **Reports.** A training file should be maintained on each cadet to record their progress during the training year. The training file should consist, as a minimum, of a Proficiency Level Two Qualification Record (Chapter 3, Annex B). Training files are temporary documents which may be disposed of upon migration of the Proficiency Level Two Qualification Record to DND 2399, *Cadet Personnel Record*.

## QUALIFICATION

12. The Proficiency Level Two qualification is awarded to cadets upon completion of the requirements specified in Chapter 3.

## RELATED DOCUMENTS

- 13. This QSP is to be used in conjunction with:
  - a. CATOs; and
  - b. A-CR-CCP-802/PF-001 *Royal Canadian Air Cadets Proficiency Level Two Instructional Guides*.

## REFERENCES

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

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## ANNEX A

### PROFICIENCY LEVEL FOUR TRAINING SUMMARY AND TIME ALLOCATION

#### PERIOD ALLOCATION

| PO No. | Performance Objective                 | EO No.                       | Enabling Objective                                                                | No. of Pd |    |
|--------|---------------------------------------|------------------------------|-----------------------------------------------------------------------------------|-----------|----|
| X01    | Participate in Citizenship Activities | MX01.01A                     | Participate in a Citizenship Tour                                                 | -         |    |
|        |                                       | MX01.01B                     | Attend a Presentation by a Community Organization                                 | -         |    |
|        |                                       | MX01.01C                     | Attend a Presentation by a Citizen-of-Interest                                    | -         |    |
|        |                                       | MX01.01D                     | Participate in the Canadian Citizenship Challenge                                 | -         |    |
|        |                                       | MX01.01E                     | Host a Citizenship Ceremony                                                       | -         |    |
|        |                                       | MX01.01F                     | Participate in an Election                                                        | -         |    |
|        |                                       | MX01.01G                     | Participate in Heritage Minutes Video Activities                                  | -         |    |
|        |                                       | MX01.01H                     | Participate in Citizenship Learning Stations                                      | -         |    |
|        |                                       | CX01.01                      | Participate in Citizenship Activities                                             | 18        |    |
|        |                                       | PO X01 - Total Mandatory     |                                                                                   |           | 3  |
|        |                                       | PO X01 - Total Complementary |                                                                                   |           | 18 |
| X02    | Perform Community Service             | MX02.01                      | Perform Community Service                                                         | 9         |    |
|        |                                       | CX02.01                      | Perform Community Service                                                         | 18        |    |
|        |                                       | PO X02 - Total Mandatory     |                                                                                   |           | 9  |
|        |                                       | PO X02 - Total Complementary |                                                                                   |           | 18 |
| 203    | Demonstrate Leadership Attributes     | M203.01                      | Discuss Leadership Within a Peer Setting                                          | 1         |    |
|        |                                       | M203.02                      | Discuss the Principles of Leadership                                              | 1         |    |
|        |                                       | M203.03                      | Discuss Effective Communication in a Peer Setting                                 | 1         |    |
|        |                                       | M203.04                      | Demonstrate Positive Group Dynamics                                               | 2         |    |
|        |                                       | M203.05                      | Discuss Influence Behaviours                                                      | 1         |    |
|        |                                       | M203.06                      | Employ Problem Solving                                                            | 2         |    |
|        |                                       | M203.07                      | Discuss Personal Integrity as a Quality of Leadership                             | 1         |    |
|        |                                       | M203.08                      | Participate in Team-Building Activities<br>Record Entries in a Reflective Journal | 1         |    |
|        |                                       | C203.01                      | Record Entries in a Reflective Journal                                            | 3         |    |
|        |                                       |                              |                                                                                   |           |    |
|        |                                       |                              |                                                                                   |           |    |
|        |                                       | C203.02                      | Employ Problem Solving                                                            | 2         |    |
|        |                                       | C203.03                      | Discuss Characteristics of a Leader                                               | 2         |    |
|        |                                       | C203.04                      | Participate in a Presentation Given by a Leader                                   | 2         |    |
|        |                                       | C203.05                      | Participate in Trust-Building Activities                                          | 1         |    |
|        |                                       | C203.06                      | Participate in Problem-Solving Activities                                         | 2         |    |
|        |                                       | PO203 - Total Mandatory      |                                                                                   |           | 10 |
|        |                                       | PO 203 - Total Complementary |                                                                                   |           | 12 |

| PO No. | Performance Objective                                     | EO No.                              | Enabling Objective                                                                                                                  | No. of Pd |
|--------|-----------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------|
| X04    | Track Participation in Physical Activities                | MX04.01                             | Participate in 60 Minutes of Moderate-to Vigorous-Intensity Physical Activity (MVPA) and Track Participation in Physical Activities | 3         |
|        |                                                           | MX04.02                             | Identify Strategies to Improve Participation in Physical Activities and Participate in the Cadet Fitness Assessment (CFA)           | 3         |
|        |                                                           | MX04.03                             | Participate in the CFA and Identify Strategies for Improving Personal Physical Fitness                                              | 3         |
|        |                                                           | CX04.01                             | Participate in the CFA and Identify Strategies for Improving Personal Physical Fitness                                              | 3         |
|        |                                                           | CX04.02                             | Participate in Activities that Reinforce the Three Components of Physical Fitness                                                   | 3         |
|        |                                                           | CX04.03                             | Participate in a Cooking Class                                                                                                      | 3         |
|        |                                                           | CX04.04                             | Attend a Personal Fitness and Healthy Living Presentation                                                                           | 3         |
|        |                                                           | CX04.05                             | Attend a Local Amateur Sporting Event                                                                                               | 3         |
|        |                                                           | <b>PO X04 - Total Mandatory</b>     |                                                                                                                                     | <b>9</b>  |
|        |                                                           | <b>PO X04 - Total Complementary</b> |                                                                                                                                     | <b>15</b> |
| X05    | Participate in Physical Activities                        | MX05.01                             | Participate in Physical Activities                                                                                                  | 9         |
|        |                                                           | CX05.01                             | Participate in Physical Activities                                                                                                  | 9         |
|        |                                                           | CX05.02                             | Participate in a Tournament                                                                                                         | 9         |
|        |                                                           | <b>PO X05 - Total Mandatory</b>     |                                                                                                                                     | <b>9</b>  |
|        |                                                           | <b>PO X05 - Total Complementary</b> |                                                                                                                                     | <b>18</b> |
| 206    | Fire the Cadet Air Rifle During Recreational Marksmanship | M206.01                             | Participate in a Recreational Marksmanship Activity                                                                                 | 3         |
|        |                                                           | C206.01                             | Practice Holding Techniques                                                                                                         | 1         |
|        |                                                           | C206.02                             | Practice Aiming Techniques                                                                                                          | 2         |
|        |                                                           | C206.03                             | Practice Firing Techniques                                                                                                          | 1         |
|        |                                                           | C106.01                             | Participate in Recreational Air Rifle Marksmanship                                                                                  | 6         |
|        |                                                           | <b>PO 206 - Total Mandatory</b>     |                                                                                                                                     | <b>3</b>  |
|        |                                                           | <b>PO 206 - Total Complementary</b> |                                                                                                                                     | <b>10</b> |
| 207    | Serve in an Air Cadet Squadron                            | M207.01                             | Identify Proficiency Level Two Training Opportunities                                                                               | 1         |
|        |                                                           | M207.02                             | Recognize Historical Aspects of the Royal Canadian Air Cadets (RCAC)                                                                | 1         |
|        |                                                           | M207.03                             | Recognize the Role and Responsibilities of the Local Sponsor                                                                        | 1         |
|        |                                                           | M207.04                             | Identify Year Two CSTC Training Opportunities                                                                                       | 1         |
|        |                                                           | C207.01                             | Identify the Rank Structure of the Royal Canadian Sea and Army Cadets                                                               | 1         |
|        |                                                           | C207.02                             | Visit a Royal Canadian Sea / Army Cadet Corps or an Air Cadet Squadron                                                              | 3         |
|        |                                                           | C207.03                             | Describe the Affiliated Unit                                                                                                        | 1         |

| PO No. | Performance Objective                                  | EO No.                              | Enabling Objective                                                                    | No. of Pd |
|--------|--------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------|-----------|
|        |                                                        | C207.04                             | Tour the Affiliated Unit                                                              | 3         |
|        |                                                        | C107.04                             | Participate in an Activity about the History of the Squadron                          | 2         |
|        |                                                        | <b>PO 207 - Total Mandatory</b>     |                                                                                       | <b>4</b>  |
|        |                                                        | <b>PO207 - Total Complementary</b>  |                                                                                       | <b>10</b> |
| 208    | Execute Drill as a Member of a Squad                   | M208.01                             | Execute Left and Right Turns on the March                                             | 2         |
|        |                                                        | M208.02                             | Form Single File From the Halt                                                        | 1         |
|        |                                                        | C208.01                             | Practice Ceremonial Drill as a Review                                                 | 2         |
|        |                                                        | C208.02                             | Execute Drill With Arms                                                               | 8         |
|        |                                                        | C108.01                             | Execute Supplementary Drill Movements                                                 | 6         |
|        |                                                        | <b>PO 208 - Total Mandatory</b>     |                                                                                       | <b>3</b>  |
|        |                                                        | <b>PO 208 - Total Complementary</b> |                                                                                       | <b>16</b> |
| 211    | Participate in Recreational Summer Biathlon Activities | C211.01                             | Identify Civilian Biathlon Opportunities                                              | 1         |
|        |                                                        | C211.02                             | Run on Alternate Terrain                                                              | 1         |
|        |                                                        | C211.03                             | Fire the Cadet Air Rifle using a Sling Following Physical Activity                    | 1         |
|        |                                                        | C211.04                             | Participate in a Competitive Summer Biathlon Activity                                 | 6         |
|        |                                                        | <b>PO 211 – Total Complementary</b> |                                                                                       | <b>9</b>  |
| X20    | Participate in CAF Familiarization Activities          | MX20.01A                            | Participate in a CAF Activity                                                         | -         |
|        |                                                        | MX20.01B                            | Participate in a CAF Familiarization Tour                                             | -         |
|        |                                                        | MX20.01C                            | Fire the C7 Rifle                                                                     | -         |
|        |                                                        | MX20.01D                            | Participate in a Mess Dinner                                                          | -         |
|        |                                                        | MX20.01E                            | Attend a CAF Presentation                                                             | -         |
|        |                                                        | MX20.01F                            | Attend a CAF Commemorative Ceremony                                                   | -         |
|        |                                                        | MX20.01G                            | Participate in CAF Video Activities                                                   | -         |
|        |                                                        | MX20.01H                            | Participate in CAF Learning Stations                                                  | -         |
|        |                                                        | CX20.01                             | Participate in CAF Familiarization Activities                                         | 18        |
|        |                                                        | <b>PO X20 - Total Mandatory</b>     |                                                                                       | <b>6</b>  |
|        |                                                        | <b>PO X20 - Total Complementary</b> |                                                                                       | <b>18</b> |
| 230    | Discuss Canadian Aviation History                      | M230.01                             | Discuss Aircraft Flown During WWI and WWII                                            | 1         |
|        |                                                        | M230.02                             | Discuss Significant Events in 20 <sup>th</sup> Century Canadian Military History      | 1         |
|        |                                                        | C230.01                             | Participate in a Presentation Given by a Member of the Memory Project Speakers Bureau | 2         |
|        |                                                        | C230.02                             | Tour a Local Aviation Museum                                                          | 3         |
|        |                                                        | C230.03                             | Discuss Significant Canadian Historical Events Relative to Aviation                   | 1         |
|        |                                                        | C130.03                             | Watch <i>On Canadian Wings</i> Video                                                  | 8         |
|        |                                                        | <b>PO 230 - Total Mandatory</b>     |                                                                                       | <b>2</b>  |
|        |                                                        | <b>PO 230- Total Complementary</b>  |                                                                                       | <b>14</b> |
| 231    | Explain Principles of Flight                           | M231.01                             | Identify the Four Forces that Act Upon an Aircraft                                    | 2         |
|        |                                                        | M231.02                             | Describe the Production of Lift by an Aircraft Wing                                   | 2         |

| PO No.  | Performance Objective                                                 | EO No.  | Enabling Objective                                                                       | No. of Pd |
|---------|-----------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------|-----------|
|         |                                                                       | M231.03 | Describe the Types of Drag that Act Upon an Aircraft                                     | 2         |
|         |                                                                       | M231.04 | Describe the Axial Movements of an Aircraft                                              | 1         |
|         |                                                                       | M231.05 | Describe Aircraft Control Surfaces                                                       | 2         |
|         |                                                                       | C231.01 | Operate an Experimental Wing                                                             | 2         |
|         |                                                                       | C231.02 | Fly a Paper Colditz Glider                                                               | 2         |
|         |                                                                       | C231.03 | Tour a Flight School                                                                     | 3         |
|         |                                                                       | C231.04 | Participate in a Presentation Given by a Guest Speaker from the Local Aviation Community | 2         |
|         |                                                                       | C231.05 | Tour a Flight Simulator                                                                  | 3         |
|         |                                                                       | C231.06 | Tour a Local Air Show                                                                    | 6         |
|         |                                                                       |         | PO231 - Total Mandatory                                                                  | 9         |
|         |                                                                       |         | PO 231 - Total Complementary                                                             | 18        |
|         |                                                                       | 232     | Describe Aero Engine Systems                                                             | M232.01   |
| M232.02 | Identify the Components of Piston-Powered Internal Combustion Engines |         |                                                                                          | 2         |
| M232.03 | Explain the Cycles of a Four-Stroke Piston-Powered Engine             |         |                                                                                          | 2         |
| M232.04 | Recognize the Functions of Oil in a Four-Stroke Piston-Powered Engine |         |                                                                                          | 1         |
| C232.01 | Identify the Characteristics of Gas Turbine Engines                   |         |                                                                                          | 2         |
| C232.02 | Identify the Characteristics of Gas Turbine Engines                   |         |                                                                                          | 2         |
| C232.03 | Identify the Characteristics of Helicopter Engines                    |         |                                                                                          | 2         |
|         | PO232 - Total Mandatory                                               |         |                                                                                          | 6         |
|         | PO 232 - Total Complementary                                          |         |                                                                                          | 6         |
| 240     | Discuss Aerospace Structures                                          | M240.01 | Explore Current Advancements in Aerospace Technology                                     | 1         |
|         |                                                                       | M240.02 | Invent a Space Technology Item                                                           | 2         |
|         |                                                                       | M240.03 | Participate in a Space Survival Scenario                                                 | 1         |
|         |                                                                       | C240.01 | Participate in a Non-Verbal Communication Activity                                       | 1         |
|         |                                                                       | C240.02 | Invent a Communication System for Space                                                  | 2         |
|         |                                                                       | C240.03 | Identify Parts of a Rocket                                                               | 1         |
|         |                                                                       | C240.04 | Navigate with a Global Positioning System (GPS)                                          | 3         |
|         |                                                                       | C240.05 | Simulate Survival in Space                                                               | 2         |
|         |                                                                       | C240.06 | Determine Direction Using Constellations on a Field Exercise                             | 1         |
|         |                                                                       |         | PO 240 - Total Mandatory                                                                 | 4         |
|         |                                                                       |         | PO 240 - Total Complementary (Max 9)                                                     | 10        |
| 260     | Participate in Aerodrome Operations Activities                        | M260.01 | Explain Aspects of Air Traffic Control (ATC)                                             | 1         |
|         |                                                                       | M260.02 | Identify Aspects of Basic Aerodrome Operations                                           | 1         |

| PO No. | Performance Objective                                     | EO No.                                | Enabling Objective                                                                                       | No. of Pd |
|--------|-----------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------|-----------|
|        |                                                           | C260.01                               | Tour an Aerodrome Security Facility                                                                      | 3         |
|        |                                                           | C260.02                               | Tour an Air Traffic Control (ATC) Tower                                                                  | 3         |
|        |                                                           | C260.03                               | Participate in a Presentation Given by an Employee of an Aerodrome                                       | 2         |
|        |                                                           | C260.04                               | Perform Marshalling                                                                                      | 1         |
|        |                                                           | C260.05                               | Tour an Aerodrome                                                                                        | 3         |
|        |                                                           | <b>PO260 - Total Mandatory</b>        |                                                                                                          | <b>2</b>  |
|        |                                                           | <b>PO260 – Total Complementary</b>    |                                                                                                          | <b>18</b> |
| 270    | Discuss Aspects of Aircraft Manufacturing and Maintenance | M270.01                               | Identify Aspects of Aircraft Manufacturing                                                               | 2         |
|        |                                                           | M270.02                               | Identify Requirements for Aircraft Maintenance                                                           | 2         |
|        |                                                           | M270.03                               | Discuss Education and Employment Opportunities in Aircraft Manufacturing and Maintenance                 | 2         |
|        |                                                           | C270.01                               | Participate in a Presentation Given by an Employee in the Aircraft Manufacturing or Maintenance Industry | 2         |
|        |                                                           | C270.02                               | Participate in a Presentation Given by an Employee in the Aircraft Manufacturing or Maintenance Industry | 1         |
|        |                                                           | C270.03                               | Tour an Aircraft Manufacturing or Maintenance Facility                                                   | 3         |
|        |                                                           | C270.04                               | Watch <i>World's Biggest Airliner: The Airbus A380 – Coming Together</i>                                 | 2         |
|        |                                                           | <b>PO 270 – Total Mandatory</b>       |                                                                                                          | <b>6</b>  |
|        |                                                           | <b>PO270 – Total Complementary</b>    |                                                                                                          | <b>8</b>  |
| 290    |                                                           | M290.01                               | Construct, Light, Maintain and Extinguish a Signal Fire                                                  | 2         |
|        |                                                           | M290.02                               | Construct a Lean-to-Style Shelter                                                                        | 3         |
|        |                                                           | M290.03                               | Construct a Simple Snare                                                                                 | 2         |
|        |                                                           | M290.04                               | Construct Ground-to-Air Signals                                                                          | 2         |
|        |                                                           | M290.05                               | Identify Hiking Techniques                                                                               | 2         |
|        |                                                           | M290.06                               | Operate a Hand-Held Radio                                                                                | 1         |
|        |                                                           | C290.01                               | Participate in a Presentation Given by a Member of a Survival Organization                               | 2         |
|        |                                                           | C290.02                               | Discuss Skinning and Cooking a Small Animal                                                              | 1         |
|        |                                                           | C290.03                               | Construct a Snow Cave                                                                                    | 3         |
|        |                                                           | C290.04                               | Collect Drinking Water Using a Solar Still                                                               | 2         |
|        |                                                           | C290.05                               | Participate in a Hike                                                                                    | 6         |
|        |                                                           | <b>PO 290 – Total Mandatory Field</b> |                                                                                                          | <b>12</b> |
|        |                                                           | <b>PO290 – Total Complementary</b>    |                                                                                                          | <b>14</b> |
| N/A    | Annual Ceremonial Review (ACR) 3                          |                                       |                                                                                                          |           |

## TRAINING DAY / WEEKEND ALLOCATION

### MANDATORY

| Activity                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Time          |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Mandatory Training Periods              | Every Proficiency Level Two cadet will be given an opportunity to experience a familiarization flight in an aircraft determined by RC Air Ops O. In addition to each familiarization flight, squadrons should maximize the training value of this allocated day by providing additional aviation training, such as EOs M231.01 (Identify the Four Forces That Act Upon an Aircraft), M260.01 (Explain Aspects of Air Traffic Control), and M270.02 (Identify Requirements for Aircraft Maintenance).                                           | 2 Days        |
| Familiarization Flying and Aviation Day | One day where cadets will train in and practice various skills drawn from training, such as EOs MX05.01 (Participate in Physical Activities), M206.01 (Participate in a Recreational Marksmanship Activity), and M240.02 (Invent a Space Technology Item). Squadrons may conduct this day with other squadrons and / or in a competition format.                                                                                                                                                                                               | 1 Day         |
| Air Cadet Skills Day                    | One day where cadets will train in and practice various skills drawn from training, such as EOs MX05.01 (Participate in Physical Activities), M406.01 (Participate in a Recreational Marksmanship Activity), C431.03 (Fly a Radio-Controlled Aircraft), C436.03 (Analyze Weather Information), C437.01 (Solve Navigation Problems With a Manual Flight Computer), C440.07 (Operate a Telescope) and C470.04 (Disassemble and Reassemble a Small Engine). Squadrons may conduct this day with other squadrons and / or in a competition format. | 1 Day         |
| Aircrew Survival Exercise               | One weekend of mandatory support will be provided for squadrons to participate in an overnight exercise to include delivery of PO 290.                                                                                                                                                                                                                                                                                                                                                                                                         | 1 Weekend     |
|                                         | <b>Total Mandatory</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>6 Days</b> |

## COMPLEMENTARY

| Activity                                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                          | Time                     |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Complementary Training Periods                         | Eighteen periods of instruction (nine per day) chosen from the complementary EOs to be delivered during full days of training.                                                                                                                                                                                                                                                                                                       | 2 Days                   |
| <b>PLUS COMBINATION OF TWO DAYS FROM THE FOLLOWING</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |
| Aviation Day                                           | One day to provide additional aviation training, such as EOs C230.02 (Tour a Local Aviation Museum), C231.01 (Operate an Experimental Wing), C260.01 (Tour an Aerodrome Security Facility), and C270.01 (Participate in a Presentation Given by an Employee of an Aerodrome).                                                                                                                                                        | 1 Day                    |
| Air Cadet Skills Day                                   | One day where cadets will train in and practice various skills drawn from training, such as CX05.01 (Participate in Physical Activities), CX05.02 (Participate in a Tournament), C106.01 (Participate in a Recreational Marksmanship Activity), C231.02 (Fly a Paper Colditz Glider), and C240.04 (Navigate With a Global Positioning System). Squadrons may conduct this day with other squadrons and / or in a competition format. | 1 Day                    |
| Aircrew Survival Exercise                              | One or two days or one weekend provided for squadrons to conduct additional training and practical experience in support of PO 290.                                                                                                                                                                                                                                                                                                  | 1 or 2 Days or 1 Weekend |
|                                                        | <b>Total Complementary</b>                                                                                                                                                                                                                                                                                                                                                                                                           | <b>4 Days</b>            |

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## **ANNEX B**

### **SCHEDULING GUIDELINES**

1. Schedule those activities that are set dates (eg, Remembrance Day activities, Regionally Directed Activities, TE activities [eg, gliding], School Breaks).
2. Schedule major and recurring activities (eg, PO X05 [Physical Activities], CO's Parades, Aircrew Survival Exercises, Annual Ceremonial Review).
3. Schedule the following training activities early in the training year:
  - a. PO 100 (Positive Social Relations for Youth),
  - b. POs 107, 207, 307, 407 and 507 (General Cadet Knowledge),
  - c. POs 303, 403 and 503 (Leadership), and
  - d. POs 309 and 409 (Instructional Techniques).
4. Schedule any special considerations, such as:
  - a. Schedule EO MX04.02 (Identify Strategies to Improve Participation in Physical Activities and Participate in the Cadet Fitness Assessment) four weeks after EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities);
  - b. Many EOs can be scheduled during training days / weekends (eg, most of PO X90 should be scheduled during the Aircrew Survival Exercise, many EOs from POs X30, X40, X60 and X70 can be scheduled during the Familiarization Flying and Aviation Day, and Air Cadet Skills Day);
  - c. For the completion of POs 303, 403, and 503 (Leadership), consider leadership assignment opportunities for Proficiency Levels Three, Four and Five cadets; leadership appointment opportunities for Proficiency Levels Four and Five cadets; and leadership project opportunities for Proficiency Level Five cadets; and
  - d. Schedule each Proficiency Level Four cadet into the Proficiency Level One and Two training schedules in order to complete EO M409.05 (Instruct a 30-Minute Lesson).
5. Schedule the remaining mandatory training (details located in the lesson specifications in Chapter 4).
6. Schedule selected complementary training.
7. Other considerations when developing the annual training schedule include:
  - a. the training environment required for each activity:
    - (1) some activities will require an outdoor environment which requires consideration for seasonal climate; and
    - (2) some activities will require the use of a special facility, such as a gymnasium or sports field; and
  - b. the availability of a technical specialist, if required to conduct the activity;

8. Considerations when implementing the training program:
  - a. Some theory is required for safety purposes and for introducing new material. However, most material can be taught using practical methods.
  - b. Training sessions need to be planned in advance to allow instructors adequate time to prepare for the delivery and conduct of training. This includes reviewing lesson specifications and instructional guides, and creating instructional materials as required.
  - c. Take adequate time to allow cadets to reflect upon and be debriefed on experiential training activities, to include future applications of the experience.

## ANNEX C

### RESOURCE REQUIREMENTS

Quantities are based on a group of 30 cadets.

The resources required for complementary training and POs X01, X02, X04, X05 and X20 depend on the activities selected by the corps. Refer to A-CR-CCP-802/PF-001, *Royal Canadian Air Cadets Proficiency Level Two Instructional Guides* for detailed lists of resources for each selected activity.

The following is a list of key items all corps require access to for the conduct of training.

| <b><u>Item</u></b>                                           | <b><u>Quantity</u></b> | <b><u>PO/EO</u></b> |
|--------------------------------------------------------------|------------------------|---------------------|
| DVD Player                                                   | 1                      | X01/X05             |
| Television                                                   | 1                      | X01/X05             |
| CD Player                                                    | 1                      | X04                 |
| Leger's 20-m Shuttle Run Test CD                             | 1                      | X04                 |
| Measuring tape                                               | 1                      | X04                 |
| Masking tape                                                 | 1                      | X04                 |
| 12-cm measuring strip                                        | 15                     | X04                 |
| Pylons                                                       | 30                     | X04                 |
| Gym mats                                                     | 15                     | X04                 |
| Cardboard / wooden box approximately 30 cm high              | 15                     | X04                 |
| Metre stick                                                  | 15                     | X04                 |
| First Aid Kit                                                | 1                      | X05                 |
| Sunscreen - SPF 30 (minimum)                                 | 1                      | X05                 |
| Insect Repellent                                             | 1                      | X05                 |
| Cadet Air Rifle - Five-shot clip                             | 45                     | 206                 |
| Cadet Air Rifle - Rifle                                      | 15                     | 206                 |
| Cadet Air Rifle - Safety Rod                                 | 15                     | 206                 |
| Cadet Air Rifle - Single Pellet Adaptor                      | 15                     | 206                 |
| Marksmanship mats                                            | 15                     | 206                 |
| Pellets - .177 calibre Air Rifle (250 Pack)                  | 6                      | 206                 |
| Pellets - .177 calibre Cleaning Pellets (80 Pack)            | 1                      | 206                 |
| Pellet container                                             | 15                     | 206                 |
| Safety goggles/glasses                                       | 15                     | 206                 |
| Target - Grouping Target CCT2000GRTD                         | 150                    | 206                 |
| Target Frame                                                 | 15                     | 206                 |
| Balloon - Round                                              | 20                     | 231                 |
| Fan - Multispeed Desktop                                     | 8                      | 231                 |
| Index cards - 100 Pack                                       | 1                      | 231                 |
| Model - Aircraft with Articulated Control Surfaces and Flaps | 1                      | 231                 |
| Skewer - Bamboo Large 1/8 inch by 12 inch                    | 2                      | 231                 |
| String                                                       | 2                      | 231                 |
| Dice - Set                                                   | 2                      | 232                 |
| Hand Cream                                                   | 1                      | 232                 |
| Tape - Masking 1 inch                                        | 1                      | 232                 |
| Battery - AA 4 Pack                                          | 10                     | 290                 |
| Fire Extinguisher - Small Dry Chemical                       | 3                      | 290                 |
| Ground Sheet                                                 | 8                      | 290                 |
| Knife with Laynard                                           | 4                      | 290                 |
| Radio - VHF Handheld                                         | 10                     | 290                 |
| Shovel                                                       | 6                      | 290                 |
| Tape - Surveyor's 100 m                                      | 10                     | 290                 |

|                               |     |     |
|-------------------------------|-----|-----|
| Tent Pegs - 8"                | 100 | 290 |
| Twine                         | 3   | 290 |
| Wire - Brass 24 gage 100 foot | 1   | 290 |

## ANNEX D

### REFERENCES

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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 Proficiency Level Two 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).”

#### **CADET EVALUATION DESIGN AND DEVELOPMENT**

3. 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).
4. Cadet evaluation is designed and developed so that all cadets are capable of achieving all POs and associated EOs. To motivate cadets to learn, cadet evaluation builds on success and confidence rather than demotivating cadets with failure and defeat.

#### **CP DEVELOPMENTAL PERIODS (DPS)**

5. The CP is designed across adolescent DP's 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.
6. 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.
7. Progressive training levels, and associated learning objectives, distinguish each DP; ensuring training is relevant, achievable and age-appropriate for the cadet population. DP's 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.
8. 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**

9. The intent of Proficiency Level Two cadet evaluation is to measure the extent of cadet participation in the scheduled mandatory and complementary training and make an assessment by comparing the level of participation to the minimum standard required for qualification.

#### **MONITORING CADET PROGRESS**

10. Cadets must meet the standard of behaviour and conduct expected from all cadets. The course officer during cadet interviews and personal counselling should adopt a proactive approach towards difficulties.
11. The course officer is encouraged to meet formally and informally with cadets throughout the training year to discuss the cadet's progress towards Proficiency Level Two qualification and to provide feedback on overall performance. At a minimum, it is expected that the course officer will meet with each cadet at the end of the training year to review the completed Chapter 3, Annex B, Proficiency Level Two Qualification Record. Guidelines for conducting cadet interviews are located at Chapter 3, Annex C.

12. Frequent absences from mandatory and complementary training that could result in the cadet not meeting the minimum standard, for Proficiency Level Two qualification, must be addressed in accordance with CATO 15-22, *Conduct and Discipline – Cadets*.

### **TRAINING COUNSELLING SESSION**

13. A training counselling session is used when a cadet is having difficulties progressing and an intervention is required to set goals for corrective action and / or remedial instruction. The Trg O is responsible for conducting training counselling sessions, except in the case of cadet rank promotions for which the CO is responsible. Guidelines for conducting training counselling sessions are located at Annex E and the Training Counselling Session Form is located at Annex E, Appendix 1.

### **ADDITIONAL ASSESSMENT OF LEARNING ACTIVITIES**

14. No additional cadet evaluations (eg, theory tests, performance checks, etc.) are to be used to determine Proficiency Level Two qualification eligibility. Therefore, these national standards are not to be supplemented with regional / local standards.

### **PROFICIENCY LEVEL TWO QUALIFICATION STANDARD**

15. The minimum standard for Proficiency Level Two qualification is:

- a. Sixty percent attendance in all scheduled mandatory and complementary training once becoming a member of the squadron, as calculated by the cadet squadron.
- b. Successful completion of each PO as outlined in the Proficiency Level Two Qualification Record located at Chapter 3, Annex B.

### **CADETS NOT MEETING THE QUALIFICATION STANDARD**

16. Cadets who do not meet the minimum qualification standard shall be given a reasonable opportunity to complete the training missed. If, by the end of the training year, the cadet still has not successfully attained any PO, the squadron CO may waive the minimum qualification standard. When waiving any PO requirement, the squadron CO shall consider:

- a. the legitimacy of the cadet's reason for failing to attain the PO;
- b. the cadet's mandatory and complementary training attendance; and
- c. the cadet's overall behaviour and performance.

17. Any cadet for whom a waiver has been issued will not be granted a Proficiency Level Two Qualification. However, they will progress to Proficiency Level Three in the third year of their squadron membership. If a CO has decided to not grant a waiver based on attendance and / or behaviour, a cadet may be held back to repeat Proficiency Level Two.

18. Cadets who have been granted a waiver of the minimum qualification standard of Proficiency Level Two and have progressed to Proficiency Level Three in the third year of their squadron membership are expected to achieve the missing Proficiency Level Two Qualification PO requirements. To facilitate this, cadets can concurrently receive credit for activities completed in Proficiency Level Three as part of also achieving Proficiency Level Two.

### **RECORDING AND REPORTING ACHIEVEMENT**

19. The progress of each cadet shall be reported using the Proficiency Level Two Qualification Record, Annex B, which is also used to determine successful completion of the Proficiency Level Two Qualification. The results shall be recorded on, and placed in, the cadet's DND 2399, Cadet Personnel Record.

**PROFICIENCY LEVEL TWO CERTIFICATE OF QUALIFICATION**

20. The Cadet Certificate of Qualification, CF 558 (NSN 7530-21-870-7685), shall be awarded to each cadet upon successful completion of the Proficiency Level Two Qualification.

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## ANNEX A

### CHARACTERISTICS OF CADET PROGRAM DEVELOPMENTAL PERIODS

| 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 CP is designed around three progressive, 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        | <ul style="list-style-type: none"> <li>Stimulation and maintenance of an enhanced interest in the CP</li> </ul> <p><b>NOTE:</b> Exposing the cadet to a variety of training activities and learning opportunities with the assessment expectation focused on participation will help accomplish this.</p> <ul style="list-style-type: none"> <li>Exposure to a broad knowledge base and skill set</li> </ul> <p><b>NOTE:</b> 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.</p> |    | <ul style="list-style-type: none"> <li>Development of a broad knowledge base and skill set as well as introducing reasoning proficiency</li> <li>Ongoing determination and development of specific specialty areas of interest and capability</li> <li>Recognition of enhanced proficiency achievement</li> <li>Ongoing stimulation and maintenance of an enhanced interest in the CP</li> </ul> |    | <ul style="list-style-type: none"> <li>Development of an enhanced knowledge, reasoning or skill proficiency in a targeted specialty area – related to interest, capability and CP requirements</li> <li>Ongoing development of the broad knowledge base and skill set as well as reasoning proficiency</li> <li>Ongoing recognition of enhanced proficiency achievement</li> <li>Ongoing stimulation and maintenance of an enhanced interest in the CP</li> </ul> |

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# ANNEX B

## PROFICIENCY LEVEL TWO QUALIFICATION RECORD

Cadet's Name: \_\_\_\_\_ Squadron: \_\_\_\_\_

***POs that are evaluated as "Incomplete" or "Completed":***

|                                        |        |                                                           | PO Assessment |           |
|----------------------------------------|--------|-----------------------------------------------------------|---------------|-----------|
| Topic                                  | PO No. | Performance Statement                                     | Incomplete    | Completed |
| Citizenship                            | X01    | Participate in Citizenship Activities                     |               |           |
| Community Service                      | X02    | Perform Community Service                                 |               |           |
| Leadership                             | 203    | Demonstrate Leadership Attributes Within a Peer Setting   |               |           |
| Personal Fitness and Healthy Living    | X04    | Track Participation in Physical Activities                |               |           |
| Physical Activities                    | X05    | Participate in Physical Activities                        |               |           |
| Air Rifle Marksmanship                 | 206    | Fire the Cadet Air Rifle During Recreational Marksmanship |               |           |
| General Cadet Knowledge                | 207    | Serve in an Air Cadet Squadron                            |               |           |
| Drill and Ceremonial                   | 208    | Execute Drill as a Member of a Squad                      |               |           |
| CAF Familiarization                    | X20    | Participate in CAF Familiarization Activities             |               |           |
| Aviation History                       | 230    | Discussion Canadian Aviation History                      |               |           |
| Principles of Flight                   | 231    | Explain Principles of Flight                              |               |           |
| Propulsion                             | 232    | Identify Characteristics of Piston-Powered Aircraft       |               |           |
| Aerospace                              | 240    | Participate in Aerospace Activities                       |               |           |
| Aerodrome Operations                   | 260    | Participate in Aerodrome Operations Activities            |               |           |
| Aircraft Manufacturing and Maintenance | 270    | Discuss Aircraft Manufacturing and Maintenance            |               |           |
| Aircrew Survival                       | 290    | Participate in a Field Exercise                           |               |           |

| Qualification Achieved |     |    | Training Officer |             |
|------------------------|-----|----|------------------|-------------|
|                        | Yes | No | Signature: _____ | Date: _____ |

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## **ANNEX C**

### **CADET INTERVIEW GUIDELINES**

---

#### **GENERAL**

---

The purpose of conducting an interview is to discuss the cadet's expectations, personal goals and learning progress (assessment for learning), and to provide feedback on overall performance.

Meet with the cadet throughout their training to discuss their progress towards achieving the qualification and to revise their action plan.

---

#### **PRE-INTERVIEW INSTRUCTIONS**

---

Gather the required resources, such as the Cadet Interview Form (Appendix 1), training schedules, pen, paper, etc.

Have the cadets review any support materials so they are able to attend the interview prepared to discuss the specific topic areas, as well as their expectations and personal goals.

Schedule interviews to allow approximately 10–15 minutes per cadet.

---

#### **CONDUCT OF AN INTERVIEW**

---



Tips for a successful interview:

- Ask questions that will provoke thought; avoid “yes or no” questions.
- 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. Welcome the cadet.
2. Complete the Cadet Interview Form.
3. Have the cadet sign the Cadet Interview Form.
4. Sign the Cadet Interview Form.

---

#### **POST-INTERVIEW INSTRUCTIONS**

---

Place a copy of the Cadet Interview Form in the cadet's training file.

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**ANNEX C, APPENDIX 1**  
**CADET INTERVIEW FORM**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Rank:   |
| Proficiency Level:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Flight: |
| <b>SECTION 1 – INITIAL INTERVIEW</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |
| <ol style="list-style-type: none"><li>1. What are your expectations for the proficiency level?</li><li>2. Do you have any questions about the training, schedule and / or assessment?</li><li>3. What activities are you most excited about?</li><li>4. What are your strengths?</li><li>5. What are some areas you would like to improve?</li><li>6. What personal goals would you like to attain? What steps will you take to achieve those goals?</li><li>7. Is there anything we should know to help make your training experience enjoyable (learning needs, allergies, etc.)?</li></ol> |         |
| <b>NOTES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |
| Cadet's Signature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |
| Officer's Signature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Date:   |

## **SECTION 2 – PERFORMANCE INTERVIEW**

1. So far, is the proficiency level meeting your expectations? If not, what can we do to meet those expectations?
2. Are there any areas of excitement or concern you would like to highlight?
3. How do you feel about your progress? \*
4. What are some areas you would like to improve?
5. What personal goals would you like to establish?

\* Give the cadet feedback on their progress and their overall performance highlighting any gaps that may exist between their self-assessment and your observations. Points to discuss may include attendance, participation, etc.

### **ACTION PLAN**

Work with the cadet to make an action plan that takes into consideration their goals and the training requirements. The action plan is a mutually agreed upon set of steps that the cadet commits to taking to reach their goals. It should be realistic and achievable and written using positive language.

### **NOTES**

Cadet's Signature:

Officer's Signature:

Date:

**SECTION 3 – FINAL INTERVIEW**

1. How did you enjoy the Proficiency Level?
2. What were some of your likes and dislikes about the training? How could it be improved?
3. How can you apply what you have learned inside and outside of cadets?
4. What are some new personal goals you want to establish?
5. What upcoming training opportunities interest you?

\* Provide the cadet with a copy of their completed Qualification Record and discuss their learning progress towards course objectives. Where a waiver has been granted, explain to the cadet what this means and what they will be required to do in the following year to meet the current qualification requirements.

**NOTES**

Cadet's Signature:

Officer's Signature:

Date:

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## ANNEX D

### TRAINING COUNSELLING SESSION GUIDELINES

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#### GENERAL

---

The purpose of the Training Counselling Session (TCS) 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.

---

#### PRE-COUNSELLING SESSION INSTRUCTIONS

---

Gather the required resources, such as TCS Form, cadet's training file, pen, paper, etc.

Review the cadet's training file and discuss their performance with other staff members as required.

Complete Section 1 of the TCS Form.

---

#### CONDUCT OF COUNSELLING SESSION

---



Tips for a successful interview:

- Ask questions that will provoke thought; avoid “yes or no” questions.
- 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. Welcome the cadet.
2. Complete Sections 2 and 3 of the TCS Form.
3. Have the cadet sign the TCS Form.
4. Sign the TCS Form.

---

#### POST-COUNSELLING SESSION INSTRUCTIONS

---

The goal of conducting training counselling is to guide a cadet towards success in the Cadet Program. Following the training counselling session the Training Officer shall meet with the CO to discuss the outcome of the session and any further steps required.

The Commanding Officer shall contact the guardian to open the lines of dialogue and include them in the action plan.

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**ANNEX D, APPENDIX 1**  
**TRAINING COUNSELLING SESSION FORM**

| <b>SECTION 1 – BACKGROUND INFORMATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Rank:   |
| Proficiency Level:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Flight: |
| Circumstances requiring TCS:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |
| Overall training progress (eg, seriousness of failure, performance in related POs, any previous difficulty and action taken, performance / behaviour, etc.):                                                                                                                                                                                                                                                                                                                                                                                        |         |
| <b>SECTION 2 – SESSION FINDINGS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |
| <ol style="list-style-type: none"><li>1. Inform the cadet they are not achieving and / or maintaining qualification standards and that you are meeting to help them correct the situation.</li><li>2. Discuss the following:<ul style="list-style-type: none"><li>• Circumstances affecting training progress</li><li>• Any previous difficulty and action taken (eg, whether or not help / additional training was provided)</li><li>• Overall performance / behaviour of cadet (eg, attendance, effort, motivation, attitude)</li></ul></li></ol> |         |

**SECTION 3 – SESSION RECOMMENDATIONS (ACTION PLAN)**

With the cadet, create an action plan that highlights the actions required for success.

Brief the cadet on the consequences should no improvement be noticed.

Cadet's Signature:

Training Officer's Signature:

Date:

**SECTION 4 – COMMANDING OFFICER REVIEW**

Record any discussion with parents regarding the progress of the cadet.

Commanding Officer's Signature:

Date:

**CHAPTER 4**  
**PERFORMANCE OBJECTIVES AND LESSON SPECIFICATIONS**

**SECTION 1**

**PO X01 – PARTICIPATE IN CITIZENSHIP ACTIVITIES**

This PO and its associated EOs are located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*.

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## **SECTION 2**

### **PO X02 – PERFORM COMMUNITY SERVICE**

This PO and its associated EOs are located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*.

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**SECTION 3****PO 203 – DEMONSTRATE LEADERSHIP ATTRIBUTES WITHIN A PEER SETTING**

1. **Performance:** Demonstrate Leadership Attributes Within a Peer Setting
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Any conditions.
3. **Standard:** In accordance with specified references, the cadet will demonstrate leadership attributes within a peer setting by:
  - a. positively contributing to a group;
  - b. displaying a positive attitude towards learning; and
  - c. being accountable for personal actions and choices.
4. **Remarks:** N/A.
5. **Complementary Material:**
  - a. Complementary material associated with PO 203 is designed to enhance the cadet's ability to demonstrate leadership attributes:
    - (1) EO C203.01 (Record Entries in a Reflective Journal),
    - (2) EO C203.02 (Employ Problem Solving),
    - (3) EO C203.03 (Discuss Characteristics of a Leader),
    - (4) EO C203.04 (Participate in a Presentation Given by a Leader),
    - (5) EO C203.05 (Participate in Trust-Building Activities), and
    - (6) EO C203.06 (Participate in Problem-Solving Activities).
  - b. Complementary training associated with PO 203 is limited to a total of 11 periods, which may be conducted during sessions or on a supported day. Squadrons are not required to use all 11 periods.

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**EO M203.01 – DISCUSS LEADERSHIP WITHIN A PEER SETTING**

1. **Performance:** Discuss Leadership Within a Peer Setting
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall discuss leadership within a peer setting.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Method              | Time   | Refs   |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------|
| TP1 | <p>Explain leadership within a peer setting, to include:</p> <ol style="list-style-type: none"> <li>a. responsibilities of a Proficiency Level Two cadet, to include:               <ol style="list-style-type: none"> <li>(1) following the chain of command;</li> <li>(2) setting the example;</li> <li>(3) being firm, fair and friendly;</li> <li>(4) being respectful to superiors and subordinates;</li> <li>(5) being aware of safety hazards;</li> <li>(6) displaying initiative; and</li> <li>(7) setting goals; and</li> </ol> </li> <li>b. squadron specific Proficiency Level Two cadet responsibilities.</li> </ol> | Interactive Lecture | 15 min | C0-134 |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Method            | Time   | Refs                  |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|-----------------------|
| TP2 | <p>Conduct a goal mapping activity by having the cadets record:</p> <p>a. short-term goals achievable at the squadron, such as:</p> <ul style="list-style-type: none"> <li>(1) improving their uniform;</li> <li>(2) improving their drill;</li> <li>(3) attending all parade nights, etc.;</li> <li>(4) long-term goals for the training year, such as; <ul style="list-style-type: none"> <li>(a) getting promoted;</li> <li>(b) achieving perfect attendance; and</li> <li>(c) attending summer training, etc.; and</li> </ul> </li> </ul> <p>b. the steps the cadets must take to achieve these goals.</p> | In-Class Activity | 10 min | C0-022 (pp. 39 to 42) |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 15 min |
| c. In-Class Activity:         | 10 min |
| d. Total:                     | 30 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to orient the cadets to junior leadership, to generate interest and present basic material.
- b. An in-class activity was chosen for TP2 as an interactive way to provoke thought, stimulate an interest among cadets and present leadership within a peer setting.

7. **References:**

- a. C0-022 (ISBN 0-02864-207-4) Cole, K. (2002). *The Complete Idiot's Guide to Clear Communication*. Indianapolis, IN: Alpha Books.
- b. C0-134 (ISBN 0-7852-7440-5) Maxwell, J. (1999). *The 21 Indispensable Qualities of a Leader: Becoming the Person Others Will Want to Follow*. Nashville, TN: Thomas Nelson Publishers.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:** Goal mapping template located at A-CR-CCP-802/PF-001, Annex A.

10. **Test Details:** N/A.

11. **Remarks:** The list of responsibilities in TP1 is not exhaustive. For each squadron Proficiency Level Two cadet responsibilities may vary.

**EO M203.02 – DISCUSS THE PRINCIPLES OF LEADERSHIP**

1. **Performance:** Discuss the Principles of Leadership
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall discuss the principles of leadership.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                     | Method              | Time   | Refs                                         |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------------------------|
| TP1 | Discuss the principles of leadership, to include: <ol style="list-style-type: none"> <li>a. leadership is influence;</li> <li>b. influence can be positive or negative; and</li> <li>c. leadership can create opportunities in life.</li> </ol> | Interactive Lecture | 5 min  | C0-112 (pp. 1 to 5)                          |
| TP2 | Share brief narratives of youth who have influenced the environment or their community in a positive way and created opportunity for their future or the future of others.                                                                      | Interactive Lecture | 10 min | C0-113 (pp. 103 and 107)<br>C0-131<br>C0-132 |
| TP3 | Discuss a peer leader who has influenced the environment or the community in a positive way.                                                                                                                                                    | Group Discussion    | 10 min |                                              |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 15 min
  - c. Group Discussion: 10 min
  - d. Total: 30 min
6. **Substantiation:**
  - a. An interactive lecture was chosen for TP1 and TP2 to orient the cadets to the principles of leadership, to generate interest and to present basic material.
  - b. A group discussion was chosen for TP3 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings about leaders who display positive influence.

7. **References:**

- a. A0-010 CATO 11-03 D Cdts 2. (2006). *Cadet Program Mandate*. Ottawa, ON: Department of National Defence.
  - b. C0-112 (ISBN 0-8407-6744-7) Maxwell, J. C. (1993). *Developing the Leader Within You*. Nashville, Tennessee: Thomas Nelson Inc. Publishers.
  - c. C0-113 (ISBN 1-882664-12-4) Karnes, F. A. & Bean, S. M. (1995). *Leadership for Students: A Practical Guide for Ages 8-18*. Waco, Texas: Prufrock Press.
  - d. C0-131 *Free the Children*. (2007). Craig Kielburger Biography. Retrieved 13 March 2007, from <http://www.freethechildren.com/aboutus/craigmarc/craigkielburger.htm>.
  - e. C0-132 Kidz World. (2007). *Teen Protects White Bear*. Retrieved 13 March 2007, from <http://www.kidzworld.com/article/1065-teen-protects-white-bear>.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** Narratives of youth who have positively influenced the environment or their community.
10. **Test Details:** N/A.
11. **Remarks:** Instructors are encouraged to research recent newsworthy articles of youth in the area that have positively influenced the environment or their community, to share as in-class stories.

**EO M203.03 – DISCUSS EFFECTIVE COMMUNICATION IN A PEER SETTING**

1. **Performance:** Discuss Effective Communication in a Peer Setting
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall discuss effective communication in a peer setting.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                           | Method              | Time   | Refs                                      |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-------------------------------------------|
| TP1 | Discuss how communication is fundamental to influencing others, to include: <ol style="list-style-type: none"> <li>a. effective communication as a skill;</li> <li>b. aspects of non-verbal communication; and</li> <li>c. sending, receiving, and responding to messages.</li> </ol> | Interactive Lecture | 10 min | C0-115 (pp. 43 and 44)<br>C0-144 (p. 18)  |
| TP2 | Explain the three styles of communication, to include: <ol style="list-style-type: none"> <li>a. aggressive communication;</li> <li>b. passive communication; and</li> <li>c. assertive communication.</li> </ol>                                                                     | Interactive Lecture | 5 min  | C0-022 (pp. 211 and 212)                  |
| TP3 | Discuss assertive communication, to include: <ol style="list-style-type: none"> <li>a. using “I” statements; and</li> <li>b. active listening skills.</li> </ol>                                                                                                                      | Interactive Lecture | 10 min | C0-022 (pp. 230 to 234)<br>C0-144 (p. 13) |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 25 min
  - c. Total: 30 min

6. **Substantiation:** An interactive lecture was chosen for this lesson to orient the cadets to effective communication in a peer setting, to generate interest and to present basic material.
7. **References:**
  - a. C0-022 (ISBN 0-02864-207-4) Cole, K. (2002). *The Complete Idiots Guide to Clear Communications*. USA: Pearson Education, Inc.
  - b. C0-115 (ISBN 0-7879-4059-3) Van Linden, J. A. & Fertman, C. I. (1998). *Youth Leadership*. San Francisco, California: Jossey-Bass Inc.
  - c. C0-144 (ISBN TBA) Colver, E. & Reid, M. (2001). *Peacebuilders 2: Peer Helping*. Ottawa, ON: YouCAN.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

**EO M203.04 – DEMONSTRATE POSITIVE GROUP DYNAMICS**

1. **Performance:** Demonstrate Positive Group Dynamics
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, and while in a peer group setting, the cadet shall demonstrate positive group dynamics, to include:
  - a. contributing to group goals;
  - b. exhibiting trust in the group;
  - c. creating a safe environment for others to share their opinions;
  - d. following the leader;
  - e. finishing the task;
  - f. displaying esprit de corps; and
  - g. appreciating others within the group.
4. **Teaching Points:**

| TP  | Description                      | Method           | Time   | Refs |
|-----|----------------------------------|------------------|--------|------|
| TP1 | Discuss positive group dynamics. | Group Discussion | 10 min |      |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Method              | Time   | Refs                               |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------------------------|
| TP2 | Explain how to display positive group dynamics, by: <ol style="list-style-type: none"> <li>contributing to group discussions by providing input;</li> <li>motivating yourself;</li> <li>ensuring your group goals are consistent with the aims of the CCM;</li> <li>trying new things;</li> <li>being sensitive to other points of view;</li> <li>knowing your teammates' strengths and weaknesses;</li> <li>increasing your self-confidence through positive self-talk;</li> <li>being cooperative;</li> <li>resolving conflicts as quickly as possible at the lowest and most appropriate level; and</li> <li>celebrating successes.</li> </ol> | Interactive Lecture | 25 min | C0-028<br>C0-114 (p. 12)<br>C0-115 |
| TP3 | Demonstrate positive group dynamics.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | In-Class Activity   | 15 min |                                    |

5. **Time:**

|    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 10 min |
| b. | Group Discussion:          | 10 min |
| c. | Interactive Lecture:       | 25 min |
| d. | In-Class Activity:         | 15 min |
| e. | Total:                     | 60 min |

6. **Substantiation:**

- A group discussion was chosen for TP1 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about positive group dynamics.
- An interactive lecture was chosen for TP2 to orient the cadets to positive group dynamics, to generate interest and to present basic material.
- An in-class activity was chosen for TP3 as an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- a. C0-028 (ISBN 0-07-046513-4) Newstrom, J. & Scannell, E. (1998). *The Big Book of Team Building Games*. USA: McGraw-Hill Companies.
- b. C0-114 (ISBN 0-02-863656-2) Pell, A. R. (1999). *The Complete Idiot's Guide to Team Building*. USA: Alpha Books.
- c. C0-115 (ISBN 0-7879-4059-3) Van Linden, J. A. & Fertman, C. I. (1998). *Youth Leadership*. San Francisco, California: Jossey-Bass Inc.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:** The instructor shall provide a safe learning and team-building environment in which the cadets will display and demonstrate positive group dynamics.

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**EO M203.05 – DISCUSS INFLUENCE BEHAVIOURS**

1. **Performance:** Discuss Influence Behaviours
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall discuss influence behaviours, to include:
  - a. the directive approach;
  - b. the persuasive approach; and
  - c. the participative approach.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                        | Method            | Time   | Refs                                    |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|-----------------------------------------|
| TP1 | Perform in a skit to portray the directive influence behaviour.                                                                                                                                                    | In-Class Activity | 5 min  | A0-047<br>A0-048                        |
| TP2 | Perform in a skit to portray the persuasive influence behaviour.                                                                                                                                                   | In-Class Activity | 5 min  | A0-047<br>A0-048                        |
| TP3 | Perform in a skit to portray the participative influence behaviour.                                                                                                                                                | In-Class Activity | 5 min  | A0-047<br>A0-048                        |
| TP4 | Discuss situations in which cadets may employ the various influence behaviours in peer group settings, to include: <ol style="list-style-type: none"> <li>a. at cadets; and</li> <li>b. at school, etc.</li> </ol> | Group Discussion  | 10 min | C0-113 (pp. 88 to 91 and 164)<br>C0-115 |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. In-Class Activity: 15 min
  - c. Group Discussion: 10 min
  - d. Total: 30 min

6. **Substantiation:**

- a. An in-class activity was chosen for TP1–3 as an interactive way to provoke thought and stimulate interest among cadets.
- b. A group discussion was chosen for TP4 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about influence behaviours.

7. **References:**

- a. A0-047 A-PA-005-000/AP-004 DND. (2005). *Leadership in the Canadian Forces: Conceptual foundations*. Ottawa, ON: Department of National Defence.
- b. A0-048 A-PA-005-000/AP-003 DND. (2005). *Leadership in the Canadian Forces: Doctrine*. Ottawa, ON: Department of National Defence.
- c. C0-113 (ISBN 1-882664-12-4) Karnes, F. A. & Bean, S. M. (1995). *Leadership for Students: A Practical Guide for Ages 8-18*. Waco, Texas: Prufrock Press.
- d. C0-115 (ISBN 0-7879-4059) Van Linden, J.A. & Fertman, C.I. (1998). *Youth Leadership*. San Francisco, California: Jossey-Bass Inc.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:** Skits found at A-CR-CCP-802/PF-001, Annex A, B and C.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO M203.06 – EMPLOY PROBLEM SOLVING**

1. **Performance:** Employ Problem Solving
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall employ problem solving.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Method              | Time   | Refs                                                                      |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|---------------------------------------------------------------------------|
| TP1 | a. Explain problem-solving, to include: <ol style="list-style-type: none"> <li>(1) trial and error analysis; and</li> <li>(2) logical analysis; and</li> </ol> b. steps in the problem-solving process, to include: <ol style="list-style-type: none"> <li>(1) confirming the task;</li> <li>(2) identifying the problem;</li> <li>(3) determining the critical factor;</li> <li>(4) developing alternate solutions;</li> <li>(5) comparing alternatives;</li> <li>(6) determining the best solution;</li> <li>(7) implementing the solution; and</li> <li>(8) evaluating the plan and the implementation.</li> </ol> | Interactive Lecture | 20 min | A2-036<br><br>C0-115<br>(pp. 45 and 46)<br><br>C0-135<br>(pp. 221 to 223) |
| TP2 | Conduct a writing activity where cadets solve problems using the technique from TP1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | In-Class Activity   | 10 min | C0-115<br>(pp. 45 and 46)                                                 |
| TP3 | Conduct a discussion where cadets explain their choices from the problem-solving exercise.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Group Discussion    | 20 min | C0-115<br>(pp. 45 and 46)                                                 |

5. **Time:**

|    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 10 min |
| b. | Interactive Lecture:       | 20 min |
| c. | In-Class Activity:         | 10 min |
| d. | Group Discussion:          | 20 min |
| e. | Total:                     | 60 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to orient the cadets to problem solving.
- b. An in-class activity was chosen for TP2 as an interactive way to provoke thought, stimulate interest among cadets and present problem-solving.
- c. A group discussion was chosen for TP3 as it allows the cadets to interact with their peers and share their knowledge, experiences, and opinions about problem-solving.

7. **References:**

- a. A2-036 A-CR-CCP-121/PT-001 D Cdts 3. (2003). *Royal Canadian Army Cadet Reference Book*. Ottawa, ON: Department of National Defence.
- b. C0-115 (ISBN 0-7879-4059-3) Van Linden, J. A. & Fertman, C. I. (1998). *Youth Leadership*. San Francisco, California: Jossey-Bass Inc.
- c. C0-135 (ISBN 0-7645-5176-0) Loeb, M. & Kindel, S. (1999). *Leadership for Dummies*. Indianapolis, Indiana: Wiley Publishing, Inc.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- b. Scenarios of problems.

9. **Learning Aids:** Scenarios of problems.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO M203.07 – DISCUSS PERSONAL INTEGRITY AS A QUALITY OF LEADERSHIP**

1. **Performance:** Discuss Personal Integrity as a Quality of Leadership
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall discuss personal integrity as a quality of leadership.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Method              | Time   | Refs                  |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-----------------------|
| TP1 | Explain personal integrity, to include: <ol style="list-style-type: none"> <li>a. the definition of integrity;</li> <li>b. that personal integrity is the foundation of leadership;</li> <li>c. that personal integrity ensures the leader will be consistent because the leader's beliefs will be mirrored by his actions; and</li> <li>d. that to earn the trust of others, a leader must lead by example because their words and actions must match.</li> </ol> | Interactive Lecture | 5 min  | C0-112 (pp. 35 to 47) |
| TP2 | Conduct an activity where cadets brainstorm where they have seen integrity displayed within their peer group, to include: <ol style="list-style-type: none"> <li>a. honesty;</li> <li>b. honour;</li> <li>c. good character;</li> <li>d. decency;</li> <li>e. fairness;</li> <li>f. sincerity; and</li> <li>g. trustworthiness, etc.</li> </ol>                                                                                                                    | In-Class Activity   | 5 min  |                       |
| TP3 | Conduct an activity where cadets create a poster that shows an example of integrity. The poster may be in the form of a drawing, map, a saying, etc.                                                                                                                                                                                                                                                                                                               | In-Class Activity   | 15 min |                       |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 5 min  |
| c. | In-Class Activity:         | 20 min |
| d. | Total:                     | 30 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to orient the cadets to personal integrity as a quality of leadership.
- b. An in-class activity was chosen for TP2 and TP3 as an interactive way to provoke thought, stimulate interest among cadets and present personal integrity as a quality of leadership.

7. **References:**

- a. A0-010 CATO 11-03 D Cdts 2. (2006). *Cadet Program Mandate*. Ottawa, ON: Department of National Defence.
- b. C0-112 (ISBN 0-8407-6744-7) Maxwell, J. C. (1993). *Developing the Leader Within You*. Nashville, Tennessee: Thomas Nelson Inc. Publishers.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:**

- a. Pencil crayons/felt markers; and
- b. 8.5 x 14 inch paper.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO M203.08 – PARTICIPATE IN TEAM-BUILDING ACTIVITIES**

1. **Performance:** Participate in Team-Building Activities
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall participate in team-building activities.
4. **Teaching Points:**

| TP  | Description                                           | Method            | Time   | Refs                            |
|-----|-------------------------------------------------------|-------------------|--------|---------------------------------|
| TP1 | Conduct team-building activities through trust games. | In-Class Activity | 25 min | C0-152<br>C1-006 (pp. 79 to 95) |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. In-Class Activity: 25 min
  - c. Total: 30 min
6. **Substantiation:** An in-class activity was chosen for this lesson as it is a fun and challenging way to expand the cadet's knowledge of team-building activities and reinforce their appreciation of the fundamentals of leadership.
7. **References:**
  - a. C0-152 Wilderdom. (2007). *Index to Group Activities, Games, Exercises and Initiatives: Trust-Building Activities*. Retrieved 26 April 2007, from <http://wilderdom.com/games/descriptions/SliceNDice.html>.
  - b. C1-006 (ISBN 0-8403-5682-X) Ronhke, C. (1984). *Silver Bullets: A Guide to Initiative Problems, Adventures Games and Trust Activities*. USA: Kendall/Hunt Publishing Company.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

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**EO C203.01 – RECORD ENTRIES IN A REFLECTIVE JOURNAL**

1. **Performance:** Record Entries in a Reflective Journal
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with Karnes, F. A. & Bean, S. M., *Leadership For Students: A Practical Guide for Ages 8-18*, Prufrock Press, the cadet shall record entries in a reflective journal after a specific training activity, by writing, mapping, or drawing.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                      | Method            | Time   | Refs                    |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|-------------------------|
| TP1 | Conduct an activity during which cadets record their thoughts on the leadership they displayed and the leadership they observed on a specific training activity. | In-Class Activity | 25 min | C0-113 (pp. 122 to 131) |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. In-Class Activity: 25 min
  - c. Total: 3 x 30 min
6. **Substantiation:** An in-class activity was chosen for this lesson to reinforce leadership principles and characteristics and to provoke thought. It also allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings about a recent team-building or training activity.
7. **References:** C0-113 (ISBN 1-882664-12-4) Karnes, F. A. & Bean, S. M. (1995). *Leadership for Students: A Practical Guide for Ages 8-18*. Waco, Texas: Prufrock Press.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** Template of questions for reflection.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. This EO should follow a significant practical activity such as a tour, a field exercise or EO M203.08 (Participate in Team-building Activities).
  - b. This EO has been allocated three periods. Squadrons may conduct this training more than once a year.

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**EO C203.02 – EMPLOY PROBLEM SOLVING**

1. **Performance:** Employ Problem Solving
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, and as a member of a group of no more than four, the cadet shall demonstrate problem solving by:
  - a. completing the activities, scenarios or simulations provided; and
  - b. peer sharing:
    - (1) the decision made; and
    - (2) the reason for the decision.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Method            | Time   | Refs                             |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|----------------------------------|
| TP1 | Conduct an activity where cadets solve problems using logical analysis by: <ol style="list-style-type: none"> <li>a. confirming the task;</li> <li>b. identifying the problem;</li> <li>c. determining the critical factor;</li> <li>d. developing an alternate solution;</li> <li>e. comparing alternate solutions;</li> <li>f. determining the best solution;</li> <li>g. implementing the solution; and</li> <li>h. evaluating the plan and implementation.</li> </ol> | In-Class Activity | 25 min | C0-115 (pp. 45 and 46)<br>A2-036 |
| TP2 | Conduct a group discussion where cadets explain their choices from the problem-solving exercise.                                                                                                                                                                                                                                                                                                                                                                          | Group Discussion  | 25 min |                                  |

5. **Time:**
  - a. Introduction / Conclusion: 10 min
  - b. In-Class Activity: 25 min
  - c. Group Discussion: 25 min
  - d. Total: 60 min

6. **Substantiation:**

- a. An in-class activity was chosen for TP1 as an interactive way to provoke thought and stimulate interest among cadets.
- b. A group discussion was chosen for TP2 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings about problem solving.

7. **References:**

- a. A2-036 A-CR-CCP-121/PT-001 D Cdts 3. (2003). *Royal Canadian Army Cadet Reference Book*. Ottawa, ON: Department of National Defence.
- b. C0-115 (ISBN 0-7879-4059-3) Van Linden, J. A. & Fertman, C. I. (1998). *Youth Leadership*. San Francisco, California: Jossey-Bass Inc.
- c. C0-135 (ISBN 0-7645-5176-0) Loeb, M. & Kindel, S. (1999). *Leadership for Dummies*. Indianapolis, Indiana: Wiley Publishing, Inc.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- b. Scenarios of problems.

9. **Learning Aids:** Scenarios of problems.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO C203.03 – DISCUSS CHARACTERISTICS OF A LEADER**

1. **Performance:** Discuss Characteristics of a Leader
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with Karnes, F. A. & Bean, S. M., *Leadership for Students: A Practical Guide for Ages 8-18*, Prufrock Press, the cadet shall discuss the characteristics of a leader, to include:
  - a. choosing a specific leader; and
  - b. sharing the characteristics of their leader.

4. **Teaching Points:**

| TP  | Description                                                                                                        | Method            | Time   | Refs                    |
|-----|--------------------------------------------------------------------------------------------------------------------|-------------------|--------|-------------------------|
| TP1 | In a group of no more than four, cadets discuss their study of a specific leader.                                  | In-Class Activity | 30 min | C0-113 (pp. 162 to 166) |
| TP2 | Conduct a group discussion where cadets volunteer to share their study of a specific leader with the entire group. | Group Discussion  | 20 min | C0-113 (pp. 162 to 166) |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 10 min |
| b. | In-Class Activity:         | 30 min |
| c. | Group Discussion:          | 20 min |
| d. | Total:                     | 60 min |

6. **Substantiation:**

- a. An in-class activity was chosen for TP1 to reinforce leadership principles to provoke thought.
- b. A group discussion was chosen for TP2 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings about characteristics of a leader.

7. **References:** C0-113 (ISBN 1-882664-12-4) Karnes, F. A. & Bean, S. M. (1995). *Leadership for Students: A Practical Guide for Ages 8-18*. Waco, Texas: Prufrock Press.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**.. Cadets will need to research a specific leader of their choice (a military person, political leader, pastor, teacher, etc.), in advance, and bring information or knowledge about that person to the class.

**EO C203.04 – PARTICIPATE IN A PRESENTATION GIVEN BY A LEADER**

1. **Performance:** Participate in a Presentation Given by a Leader
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough for the entire group.
3. **Standard:** The cadet shall participate in a presentation given by a leader.
4. **Teaching Points:** The leadership guest speaker is asked to:
  - a. describe their leadership characteristics, to include:
    - (1) their principles of leadership; and
    - (2) their qualities as a leader; and
  - b. facilitate a question and answer period.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Interactive Lecture:       | 50 min |
| c. Total:                     | 60 min |
6. **Substantiation:** An interactive lecture was chosen for this lesson to review, clarify, emphasize and summarize the teaching points.
7. **References:** N/A.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. This EO is not to be conducted by squadron personnel so as to expose cadets to other leaders.
  - b. This EO may be duplicated by using a variety of leaders during optional periods in the training schedule.
  - c. Required training aids should be determined by contacting the speaker prior to the presentation.
  - d. There is no instructional guide for the lesson.

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**EO C203.05 – PARTICIPATE IN TRUST-BUILDING ACTIVITIES**

1. **Performance:** Participate in Trust-Building Activities
2. **Conditions:**
  - a. Given:
    - (1) a blindfold;
    - (2) supervision; and
    - (3) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with Ronhke, C., *Silver Bullets: A Guide to Initiative Problems, Adventures Games and Trust Activities*, Kendall/Hunt Publishing Company, the cadet shall participate in team-building activities, using problem-solving techniques and reflective thinking skills.

4. **Teaching Points:**

| TP  | Description                                           | Method       | Time   | Refs                  |
|-----|-------------------------------------------------------|--------------|--------|-----------------------|
| TP1 | Conduct team-building activities through trust games. | Experiential | 25 min | C1-006 (pp. 79 to 95) |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Experiential: 25 min
  - c. Total: 30 min
6. **Substantiation:** An experiential approach was chosen for this lesson as it allows the cadets to acquire new skills through a direct experience. This approach allows cadets to experience trust-building activities and define that experience on a personal level.
7. **References:** C1-006 (ISBN 0-8403-5682-X) Ronhke, C. (1984). *Silver Bullets: A Guide to Initiative Problems, Adventures Games and Trust Activities*. USA: Kendall/Hunt Publishing Company.
8. **Training Aids:** A blindfold.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

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**EO C203.06 – PARTICIPATE IN PROBLEM-SOLVING ACTIVITIES**

1. **Performance:** Participate in Problem-Solving Activities
2. **Conditions:**
  - a. Given:
    - (1) a stopwatch;
    - (2) supervision; and
    - (3) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with Ronhke, C., *Silver Bullets: A Guide to Initiative Problems, Adventures Games and Trust Activities*, Kendall/Hunt Publishing Company, the cadet shall participate in team-building activities, using problem-solving techniques and reflective thinking skills.

4. **Teaching Points:**

| TP  | Description                                                     | Method       | Time   | Refs                       |
|-----|-----------------------------------------------------------------|--------------|--------|----------------------------|
| TP1 | Conduct team-building activities through problem-solving games. | Experiential | 25 min | C1-006<br>(pp. 110 to 123) |

5. **Time:**
  - a. Introduction / Conclusion: 10 min
  - b. Experiential: 50 min
  - c. Total: 60 min
6. **Substantiation:** An experiential approach was chosen for this lesson as it allows the cadets to acquire new skills through a direct experience. This approach allows cadets to experience trust-building activities and define that experience on a personal level.
7. **References:** C1-006 (ISBN 0-8403-5682-X) Ronhke, C. (1984). *Silver Bullets: A Guide to Initiative Problems, Adventures Games and Trust Activities*. USA: Kendall/Hunt Publishing Company.
8. **Training Aids:** A stopwatch.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

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## **SECTION 4**

### **PO X04 – TRACK PARTICIPATION IN PHYSICAL ACTIVITIES**

This PO and its associated EOs are located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*.

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## **SECTION 5**

### **PO X05 – PARTICIPATE IN PHYSICAL ACTIVITIES**

This PO and its associated EOs are located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*.

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## SECTION 6

### PO 206 – FIRE THE CADET AIR RIFLE DURING RECREATIONAL MARKSMANSHIP

1. **Performance:** Fire the Cadet Air Rifle During Recreational Marksmanship
2. **Conditions:**
  - a. Given:
    - (1) cadet air rifle;
    - (2) cadet air rifle safety rod;
    - (3) safety glasses/goggles;
    - (4) approved air rifle pellets;
    - (5) target frame;
    - (6) suitable target;
    - (7) local Range Standing Orders;
    - (8) supervision; and
    - (9) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Air rifle range constructed IAW A-CR-CCP-177/PT-001, *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*, Chapter 1, Section 8.
3. **Standard:** In accordance with specified references, the cadet will fire the cadet air rifle while participating in recreational marksmanship by:
  - a. carrying out safety precautions;
  - b. applying basic marksmanship techniques; and
  - c. following the rules of and commands given on a range.
4. **Remarks:** All range practices must be conducted by a Range Safety Officer (RSO).
5. **Complementary Material:**
  - a. Complementary material associated with PO 206 is designed to enhance the cadet's air rifle marksmanship experience, to include:
    - (1) EO C206.01 (Practice Holding Techniques);
    - (2) EO C206.02 (Practice Aiming Techniques); and
    - (3) EO C206.03 (Practice Firing Techniques).
  - b. Some complementary training offered in Proficiency Level One may be selected as complementary training in Proficiency Level Two, specifically EO C106.01 (Participate in Recreational Air Rifle Marksmanship).
  - c. When selecting complementary material from the Proficiency Level One, training staff shall review the applicable performance objective, lesson specification, and instructional guide.

- d. Complementary training associated with PO 206 is limited to a total of ten periods conducted during sessions or on a supported day. No more than four periods in total shall be used to support EOs C206.01 to C206.03, marksmanship techniques. Squadrons are not required to use all ten periods.
- e. It is not necessary to conduct these EOs in sequential order; however, squadrons choosing to capitalize on marksmanship training should complete EOs C206.01 to C206.03, marksmanship techniques, prior to conducting EO C106.01 (Participate in Recreational Air Rifle Marksmanship).

**EO M206.01 – PARTICIPATE IN A RECREATIONAL MARKSMANSHIP ACTIVITY**

1. **Performance:** Participate in a Recreational Marksmanship Activity
2. **Conditions:**
  - a. Given:
    - (1) cadet air rifle;
    - (2) cadet air rifle safety rod;
    - (3) safety glasses/goggles;
    - (4) approved air rifle pellets;
    - (5) target frame;
    - (6) suitable target;
    - (7) shooting mat;
    - (8) local range standing orders;
    - (9) supervision; and
    - (10) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Air rifle range constructed IAW A-CR-CCP-177/PT-001, Chapter 1, Section 8.
3. **Standard:** In accordance with specified references, the cadet shall participate in a recreational marksmanship activity.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                          | Method              | Time  | Refs                                        |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|---------------------------------------------|
| TP1 | Conduct a range briefing, to include: <ol style="list-style-type: none"> <li>a. explaining pertinent sections of range standing orders;</li> <li>b. reviewing general rules observed on all ranges;</li> <li>c. reviewing commands used on an air rifle range;</li> <li>d. describing the layout of the range; and</li> <li>e. reviewing hand-washing procedures on completion of firing.</li> </ol> | Interactive Lecture | 5 min | A0-027<br>(p. 1-3-4 and pp. 1-8-1 to 1-8-4) |

| TP  | Description                                                                                                                                                                                                                                                                                      | Method             | Time   | Refs |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------|------|
| TP2 | Supervise the cadets' participation in a recreational marksmanship activity, choosing from the following categories:<br><br>a. classification;<br>b. fun activities;<br>c. timed activities; or<br>d. progressive skill achievement activities; or<br>e. competitive team/individual activities. | Practical Activity | 75 min |      |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 10 min |
| b. | Interactive Lecture:       | 5 min  |
| c. | Practical Activity:        | 75 min |
| d. | Total:                     | 90 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 to present important information about the marksmanship activity.
- A practical activity was chosen for TP2 as it is an interactive way to allow cadets to experience recreational marksmanship in a safe, controlled environment. This activity contributes to the development of marksmanship skills and knowledge in a fun and challenging setting.

7. **References:**

- A0-027 A-CR-CCP-177/PT-001 D Cdts (2001). *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*. Ottawa, ON: Department of National Defence.

8. **Training Aids:**

- Cadet air rifle;
- Cadet air rifle safety rod;
- Safety glasses/goggles;
- Approved air rifle pellets;
- Target frame;
- Suitable target;
- Shooting mat;
- Flags (red and green); and
- Local range standing orders.

9. **Learning Aids:**
  - a. Cadet air rifle;
  - b. Cadet air rifle safety rod;
  - c. Safety glasses/goggles;
  - d. Approved air rifle pellets;
  - e. Target frame;
  - f. Suitable targets; and
  - g. Shooting mat.
10. **Test Details:** N/A.
11. **Remarks:** Cadets must successfully complete the cadet air rifle handling test (found at Chapter 3, Annex C) prior to firing pellets or cleaning pellets on an air rifle range.

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**EO C206.01 – PRACTICE HOLDING TECHNIQUES**

1. **Performance:** Practice Holding Techniques
2. **Conditions:**
  - a. Given:
    - (1) cadet air rifle;
    - (2) cadet air rifle sling;
    - (3) supervision; and
    - (4) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facility and/or an air rifle range constructed IAW A-CR-CCP-177/PT-001, Chapter 1, Section 8.
3. **Standard:** IAW A-CR-CCP-177/PT-001, the cadet shall practice holding techniques, to include:
  - a. adopting the prone position; and
  - b. holding the cadet air rifle, using the cadet air rifle sling for support.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Method        | Time  | Refs            |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------|-----------------|
| TP1 | <p>Explain and demonstrate adopting the prone position, ensuring:</p> <ol style="list-style-type: none"> <li>a. the bodyweight is equally distributed;</li> <li>b. the position is consistent throughout the relay;</li> <li>c. the body forms a 5–20 degree angle to the line of sight;</li> <li>d. the body and spine are straight;</li> <li>e. the left leg is parallel with the spine;</li> <li>f. the right foot is straight out or turned to the right;</li> <li>g. the left foot is straight behind on the toe or pointed to the right; and</li> <li>h. the right knee is brought up so the thigh forms a 30–45 degree angle with the left leg.</li> </ol> | Demonstration | 5 min | A0-027 (p. 2-7) |

| TP  | Description                                                                                                                                                                                                                                                                 | Method        | Time   | Refs                        |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|-----------------------------|
| TP2 | Explain and demonstrate holding techniques using the cadet air rifle sling, to include:<br>a. assembling the sling;<br>b. positioning the sling on the arm;<br>c. adjusting the arm loop;<br>d. attaching the sling to the cadet air rifle;<br>e. adjusting the rifle loop. | Demonstration | 10 min | A0-027<br>(pp. 2-7 and 2-8) |
| TP3 | Conduct a holding technique activity to include:<br>a. the prone position; and<br>b. the use of a sling.                                                                                                                                                                    | Performance   | 10 min |                             |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Demonstration:             | 15 min |
| c. Performance:               | 10 min |
| d. Total:                     | 30 min |

6. **Substantiation:**

- Demonstration was chosen for TP1 and TP2 as it allows the instructor to explain and demonstrate the holding techniques that the cadet is expected to acquire.
- Performance was chosen for TP3 as it provides an opportunity for the cadets to practice holding techniques under supervision.

7. **References:** A0-027 A-CR-CCP-177/PT-001 D Cdts 3. (2001). *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*. Ottawa, ON: Department of National Defence.8. **Training Aids:**

- Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- Cadet air rifle;
- Cadet air rifle sling; and
- Shooting mat (if available).

9. **Learning Aids:**

- Cadet air rifle;
- Cadet air rifle sling; and
- Shooting mat (if available).

10. **Test Details:** N/A.

11. **Remarks:**

- a. Instructions may be modified for left-handed cadets (e.g. switching left hand/foot when instructions call for right hand/foot).
- b. This EO is intended to enhance and further develop techniques taught in EO M106.03 (Apply Basic Marksmanship Techniques).

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**EO C206.02 – PRACTICE AIMING TECHNIQUES**

1. **Performance:** Practice Aiming Techniques
2. **Conditions:**
  - a. Given:
    - (1) cadet air rifle;
    - (2) suitable target;
    - (3) supervision; and
    - (4) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facility and/or an air rifle range constructed IAW A-CR-CCP-177/PT-001, Chapter 1, Section 8.
3. **Standard:** IAW A-CR-CCP-177/PT-001, the cadet shall practice aiming techniques, to include:
  - a. determining the proper eye usage;
  - b. identifying aspects of aiming; and
  - c. applying breathing techniques.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Method                        | Time   | Refs             |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------|------------------|
| TP1 | Explain, demonstrate and have cadets practice proper eye usage, to include: <ol style="list-style-type: none"> <li>a. determining the master eye;</li> <li>b. firing with both eyes open; and</li> <li>c. avoiding fixed vision.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Demonstration and Performance | 15 min | A0-027 (p. 2-10) |
| TP2 | Identify and explain aspects of aiming, to include: <ol style="list-style-type: none"> <li>a. the sight system of the cadet air rifle, to include:               <ol style="list-style-type: none"> <li>(1) the front sight; and</li> <li>(2) the rear sight, to include:                   <ol style="list-style-type: none"> <li>(a) peep sight;</li> <li>(b) elevation; and</li> <li>(c) windage.</li> </ol> </li> </ol> </li> <li>b. natural head position; and</li> <li>c. eye relief.</li> </ol> <p><b>Note:</b> Explain that elevation is the up and down movement, and windage is the left and right movement of the rear sights. Adjusting sights will not be covered at this time.</p> | Interactive Lecture           | 25 min | A0-027 (p. 2-11) |

| TP  | Description                                                                                                                                                                                                                                                                         | Method                        | Time   | Refs             |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------|------------------|
| TP3 | <p>Explain, demonstrate and have cadets practice marksmanship-related breathing, to include:</p> <ul style="list-style-type: none"> <li>a. discussing the importance of controlled breathing in marksmanship; and</li> <li>b. achieving a controlled breathing sequence.</li> </ul> | Demonstration and Performance | 15 min | A0-027 (p. 2-12) |

5. **Time:**

- |    |                                |        |
|----|--------------------------------|--------|
| a. | Introduction / Conclusion:     | 5 min  |
| b. | Demonstration and Performance: | 30 min |
| c. | Interactive Lecture:           | 25 min |
| d. | Total:                         | 60 min |

6. **Substantiation:**

- a. Demonstration and performance was chosen for TP1 and TP3 as it allows the instructor to explain and demonstrate aiming techniques while providing an opportunity for the cadets to practice these skills under supervision.
- b. An interactive lecture was chosen for TP2 to introduce the aspects of aiming.

7. **References:** A0-027 A-CR-CCP-177/PT-001 D Cdts 3. (2001). *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*. Ottawa, ON: Department of National Defence.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- b. Cadet air rifle;
- c. Cadet air rifle sling;
- d. Suitable target; and
- e. Shooting mat (if available).

9. **Learning Aids:**

- a. Cadet air rifle;
- b. Cadet air rifle sling;
- c. Suitable target; and
- d. Shooting mat (if available).

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO C206.03 – PRACTICE FIRING TECHNIQUES**

1. **Performance:** Practice Firing Techniques
2. **Conditions:**
  - a. Given:
    - (1) cadet air rifle;
    - (2) supervision; and
    - (3) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facility and/or an air rifle range constructed IAW A-CR-CCP-177/PT-001, Chapter 1, Section 8.
3. **Standard:** IAW A-CR-CCP-177/PT-001, while holding the cadet air rifle in the prone position, the cadet shall practice firing techniques, to include:
  - a. practicing natural alignment;
  - b. demonstrating trigger control; and
  - c. defining follow-through.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Method                        | Time   | Refs                          |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------|-------------------------------|
| TP1 | Explain, demonstrate and have the cadets practice natural alignment by: <ol style="list-style-type: none"> <li>a. adopting a comfortable prone position;</li> <li>b. acquiring a sight picture;</li> <li>c. closing both eyes;</li> <li>d. taking several normal breaths to relax the muscles;</li> <li>e. looking through sights when comfortable;</li> <li>f. adjusting body position until a proper sight picture is achieved; and</li> <li>g. proceeding with firing.</li> </ol> | Demonstration and Performance | 15 min | A0-027 (p. 1-5-7)             |
| TP2 | Demonstrate and explain trigger control, to include: <ol style="list-style-type: none"> <li>a. position of the hand on the rifle;</li> <li>b. trigger finger position; and</li> <li>c. squeezing the trigger.</li> </ol>                                                                                                                                                                                                                                                             | Demonstration                 | 5 min  | A0-027 (pp. 1-5-9 and 1-5-10) |
| TP3 | Define follow-through as the act of remaining in a stable prone position for two seconds and reacquiring the sight picture after firing the air rifle.                                                                                                                                                                                                                                                                                                                               | Interactive Lecture           | 5 min  | A0-027 (p. 1-5-10)            |

5. **Time:**

- |    |                                |        |
|----|--------------------------------|--------|
| a. | Introduction / Conclusion:     | 5 min  |
| b. | Demonstration and Performance: | 15 min |
| c. | Demonstration:                 | 5 min  |
| d. | Interactive Lecture:           | 5 min  |
| e. | Total:                         | 30 min |

6. **Substantiation:**

- a. Demonstration and performance was chosen for TP1 as it allows the instructor to explain and demonstrate firing techniques while providing an opportunity for the cadets to practice these skills under supervision.
- b. Demonstration was chosen for TP2 as it allows the instructor to explain and demonstrate trigger control.
- c. An interactive lecture was chosen for TP3 to present basic material on follow-through.

7. **References:** A0-027 A-CR-CCP-177/PT-001 D Cdts 3. (2001). *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*. Ottawa, ON: Department of National Defence.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- b. Cadet air rifle;
- c. Cadet air rifle sling;
- d. Suitable target; and
- e. Shooting mat (if available).

9. **Learning Aids:**

- a. Cadet air rifle;
- b. Cadet air rifle sling;
- c. Suitable target; and
- d. Shooting mat (if available).

10. **Test Details:** N/A.

11. **Remarks:** N/A.

## SECTION 7

### PO 207 – SERVE IN AN AIR CADET SQUADRON

1. **Performance:** Serve in an Air Cadet Squadron
2. **Conditions:**
  - a. Given:
    - (1) Supervision, and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Any conditions.
3. **Standard:** In accordance with specified references, the cadet will participate in a discussion on serving in a Royal Canadian Air Cadet Squadron, to include:
  - a. identifying training opportunities available in year two;
  - b. recognizing significant historical aspects related to the Royal Canadian Air Cadets;
  - c. recognizing the role and responsibility of the local sponsor; and
  - d. identifying year two CSTC training opportunities.
4. **Remarks:**
  - a. EO M207.01 (Identify Proficiency Level Two Training Opportunities) shall be conducted at the beginning of the training year.
  - b. EO M207.04 (Identify Year Two CSTC Training Opportunities) shall be conducted prior to CSTC application deadlines.
5. **Complementary Material:**
  - a. Complementary material associated with PO 207 is designed to enhance the cadet's knowledge of serving in an Air Cadet Squadron:
    - (1) EO C207.01 (Identify the Rank Structure of the Royal Canadian Sea and Army Cadets);
    - (2) EO C207.02 (Visit a Royal Canadian Sea/Army Cadet Corps or an Air Cadet Squadron);
    - (3) EO C207.03 (Describe the Affiliated Unit); and
    - (4) EO C207.04 (Tour the Affiliated Unit).
  - b. Complementary material associated with PO 207 is limited to a total of 8 periods, which may be conducted during sessions or on a supported day. Squadrons are not required to use all 8 periods.

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**EO M207.01 – IDENTIFY PROFICIENCY LEVEL TWO TRAINING OPPORTUNITIES**

1. **Performance:** Identify Proficiency Level Two Training Opportunities
2. **Conditions:**
  - a. Given:
    - (1) Handout of Performance Objectives (POs) and Enabling Objectives (EOs) of Proficiency Level Two training opportunities;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify Proficiency Level Two training opportunities, to include:
  - a. mandatory; and
  - b. complementary.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Method              | Time   | Refs                 |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------|
| TP1 | Identify Proficiency Level Two mandatory training, to include: <ol style="list-style-type: none"> <li>a. training common to the sea, Army, and air elements of the CCO, to include:               <ol style="list-style-type: none"> <li>(1) citizenship;</li> <li>(2) community service;</li> <li>(3) leadership;</li> <li>(4) personal fitness and healthy living;</li> <li>(5) recreational sports;</li> <li>(6) air rifle marksmanship;</li> <li>(7) general cadet knowledge; and</li> <li>(8) drill.</li> </ol> </li> <li>b. air elemental training, to include:               <ol style="list-style-type: none"> <li>(1) aviation;</li> <li>(2) aviation technologies;</li> <li>(3) aerospace; and</li> <li>(4) aircrew survival.</li> </ol> </li> </ol> | In-Class Activity   | 15 min | A0-010               |
| TP2 | Identify Proficiency Level Two complementary training opportunities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Interactive Lecture | 5 min  | See Remarks para. 11 |

| TP  | Description                                                          | Method            | Time  | Refs |
|-----|----------------------------------------------------------------------|-------------------|-------|------|
| TP3 | Conduct an activity on Proficiency Level Two training opportunities. | In-Class Activity | 5 min |      |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 5 min  |
| c. | In-Class Activity:         | 20 min |
| d. | Total:                     | 30 min |

6. **Substantiation:**

- An in-class activity was chosen for TPs 1 and 2 as it is an interactive way to provoke thought and stimulate interest among cadets.
- An interactive lecture was chosen for TP2 to orient the cadets to and generate interest in Proficiency Level Two training opportunities.

7. **References:** A0-010 CATO 11-03 D Cdts 2. (2006). *Cadet Program Mandate*. Ottawa, ON: Department of National Defence.8. **Training Aids:**

- Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- Handout of the EOs and POs for Proficiency Level Two training located at A-CR-CCP-802/PF-001, Annex A; and
- Tape.

9. **Learning Aids:** Handout of POs and EOs for Proficiency Level Two training opportunities located at A-CR-CCP-802/PF-001, Annex A.10. **Test Details:** N/A.11. **Remarks:**

- For Proficiency Level Two complementary training opportunities in TP2, refer to the squadron's annual training plan.
- This EO should be scheduled as early as possible in the training year. See sample schedule attached to Chapter 2, Annex C of the QSP.

**EO M207.02 – RECOGNIZE HISTORICAL ASPECTS OF THE ROYAL CANADIAN AIR CADETS (RCAC)**

1. **Performance:** Recognize Historical Aspects of the Royal Canadian Air Cadets (RCAC)
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall recognize historical aspects of the RCAC, to include:
  - a. significant events in the Air Cadet Program;
  - b. uniforms; and
  - c. the Air Cadet League of Canada.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Method            | Time   | Refs             |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|------------------|
| TP1 | Introduce historical aspects of the Air Cadet Program, to include: <ol style="list-style-type: none"> <li>a. significant events in the Air Cadet Program, to include:               <ol style="list-style-type: none"> <li>(1) the world wars;</li> <li>(2) the post-war period;</li> <li>(3) unification of the Canadian Forces; and</li> <li>(4) girls in the Cadet Program;</li> </ol> </li> <li>b. changes in the Air Cadet uniform; and</li> <li>c. significant dates in the Air Cadet League, to include:               <ol style="list-style-type: none"> <li>(1) the early days;</li> <li>(2) the inauguration;</li> <li>(3) the post-war period; and</li> <li>(4) the post-unification years from 1968 to 2000.</li> </ol> </li> </ol> | In-Class Activity | 15 min | A0-045<br>C3-077 |
| TP2 | Discuss historical aspects of the RCAC, to include: <ol style="list-style-type: none"> <li>a. topics that were of interest; and</li> <li>b. why the topic was interesting.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Group Discussion  | 10 min |                  |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. In-Class Activity:         | 15 min |
| c. Group Discussion:          | 10 min |
| d. Total:                     | 30 min |

6. **Substantiation:**

- a. An in-class activity was chosen for TPs 1 as it is an interactive way to present the content and stimulate interest among cadets.
- b. A group discussion was chosen for TP2 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about the history of the Air Cadet Program.

7. **References:**

- a. A0-045 Cadets Canada. (2007). *About Cadets – History*. Retrieved February 19, 2007, from [http://www.cadets.ca/about-nous/histo\\_e.asp](http://www.cadets.ca/about-nous/histo_e.asp).
- b. C3-077 Air Cadet League. (2007). *General – History*. Retrieved February 19, 2007, from [http://www.aircadetleague.com/General/history\\_e.html](http://www.aircadetleague.com/General/history_e.html).

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:** After the introduction, the class shall be divided into three groups. Each group will begin at a separate learning station. Each group will rotate to a new learning station after approximately five minutes.

**EO M207.03 – RECOGNIZE THE ROLE AND RESPONSIBILITIES OF THE LOCAL SPONSOR**

1. **Performance:** Recognize the Role and Responsibilities of the Local Sponsor
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall recognize the role and responsibilities of the local sponsor.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Method              | Time   | Refs             |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------|
| TP1 | Define sponsor and sponsoring committee.                                                                                                                                                                                                                                                                                                                                                                                                                              | Interactive Lecture | 5 min  | A0-040 p. 6/40   |
| TP2 | Describe the local sponsoring body, to include: <ol style="list-style-type: none"> <li>a. identifying the local sponsoring body, such as:               <ol style="list-style-type: none"> <li>(1) the Navy League;</li> <li>(2) the Air Force Association;</li> <li>(3) the Rotary Club;</li> <li>(4) the Legion; and</li> <li>(5) a parents committee, etc.; and</li> </ol> </li> <li>b. identifying positions and members of the local sponsoring body.</li> </ol> | Interactive Lecture | 10 min |                  |
| TP3 | Explain the role and responsibilities of the sponsoring committee, to include: <ol style="list-style-type: none"> <li>a. recruiting cadets;</li> <li>b. attracting officers to the squadron;</li> <li>c. screening volunteers; and</li> <li>d. providing adequate office and training facilities.</li> </ol>                                                                                                                                                          | Interactive Lecture | 10 min | A0-040<br>A0-046 |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 25 min
  - c. Total: 30 min

6. **Substantiation:** The interactive lecture was chosen for this lesson to orient the cadets to the role and responsibilities of the local sponsor and to present basic material.
7. **References:**
  - a. A0-040 (2005-113124) *Memorandum of Understanding Between the DND and the Leagues (2005)*. Ottawa, ON. Department of National Defence.
  - b. A0-046 Scott, M. (Ed.). (2003). Clarifying Civilian Roles in Cadet Corps and Squadrons. *Cadence: The Leadership Magazine of the Canadian Cadet Movement*, Issue 11, 30–32.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. This EO may be delivered by a member of the local sponsoring body.
  - b. The guest speaker shall be briefed on the TPs prior to the lesson.

**EO M207.04 – IDENTIFY YEAR TWO CSTC TRAINING OPPORTUNITIES**

1. **Performance:** Identify Year Two CSTC Training Opportunities
2. **Conditions:**
  - a. Given:
    - (1) CATO 51-01, *Air Cadet Program Outline*;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify year two CSTC training opportunities, to include:
  - a. areas of interest;
  - b. courses within each area of interest; and
  - c. prerequisites for the courses within each area of interest.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                        | Method              | Time   | Refs                                 |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------------------|
| TP1 | Discuss the areas of interest of CSTC programming, to include: <ol style="list-style-type: none"> <li>a. sports and fitness;</li> <li>b. music;</li> <li>c. marksmanship;</li> <li>d. leadership;</li> <li>e. aviation;</li> <li>f. aviation technology;</li> <li>g. aerospace; and</li> <li>h. aircrew survival.</li> </ol>       | Group Discussion    | 10 min | A0-010<br>A0-033<br>A3-029           |
| TP2 | Discuss selection of year two summer courses, to include: <ol style="list-style-type: none"> <li>a. all three-week courses offered within each area of common interest;</li> <li>b. all the three-week courses offered within each elementally-specific area; and</li> <li>c. prerequisites for each three-week course.</li> </ol> | Interactive Lecture | 15 min | A0-010<br>A0-033<br>A3-003<br>A3-029 |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Group Discussion:          | 10 min |
| c. Interactive Lecture:       | 15 min |
| d. Total:                     | 30 min |

6. **Substantiation:**

- a. A group discussion was chosen for TP1 as it allows the cadets to interact with their peers and share their experiences, opinions, and feelings about year two CSTC training opportunities.
- b. An interactive lecture was chosen for TP2 to orient the cadets to year two CSTC training opportunities and to generate interest.

7. **References:**

- a. A0-010 CATO 11-03 D Cdts 2. (2006). *Cadet Program Mandate*. Ottawa, ON: Department of National Defence.
- b. A0-033 CATO 14-21 D Cdts 3. (2004). *Music Training and Education With the Canadian Cadet Organizations*. Ottawa, ON: Department of National Defence.
- c. A3-003 CATO 54-20 D Cdts 3. (2000). *Summer Training Directive – Royal Canadian Air Cadets*. Ottawa, ON: Department of National Defence.
- d. A3-029 CATO 51-01 D Cdts 3. (2006). *Air Cadet Program Outline*. Ottawa, ON: Department of National Defence.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:**

- a. This EO should be conducted before the summer training application deadline is reached.
- b. It is strongly recommended that the summer training application forms be completed during a training session after this EO has been conducted.

**EO C207.01 – IDENTIFY THE RANK STRUCTURE OF THE ROYAL CANADIAN SEA AND ARMY CADETS**

1. **Performance:** Identify the Rank Structure of the Royal Canadian Sea and Army Cadets
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify the rank structure of:
  - a. the Royal Canadian Sea Cadets; and
  - b. the Royal Canadian Army Cadets.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Method              | Time   | Refs                       |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------|
| TP1 | Identify: <ol style="list-style-type: none"> <li>a. Sea Cadet rank structure, to include:               <ol style="list-style-type: none"> <li>(1) Ordinary Seaman (OS);</li> <li>(2) Able Seaman (AB);</li> <li>(3) Leading Seaman (LS);</li> <li>(4) Master Seaman (MS);</li> <li>(5) Petty Officer Second Class (PO2);</li> <li>(6) Petty Officer First Class (PO1);</li> <li>(7) Chief Petty Officer Second Class (CPO2);</li> <li>(8) Chief Petty Officer First Class (CPO1); and</li> </ol> </li> <li>b. Army Cadet rank structure, to include:               <ol style="list-style-type: none"> <li>(1) Cadet;</li> <li>(2) Private (Pte);</li> <li>(3) Corporal (Cpl);</li> <li>(4) Master Corporal (MCpl);</li> <li>(5) Sergeant (Sgt);</li> <li>(6) Warrant Officer (WO);</li> <li>(7) Master Warrant Officer (MWO); and</li> <li>(8) Chief Warrant Officer (CWO).</li> </ol> </li> </ol> | Interactive Lecture | 10 min | A0-001<br>A1-003<br>A2-030 |

| TP  | Description                                                                           | Method | Time   | Refs |
|-----|---------------------------------------------------------------------------------------|--------|--------|------|
| TP2 | Conduct an activity to familiarize cadets with the Sea and Army Cadet rank structure. | Game   | 15 min |      |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 10 min |
| c. | Game:                      | 15 min |
| d. | Total:                     | 30 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 to orient the cadets to the sea and Army Cadet rank structure, to generate interest and to present basic material.
- A game was chosen for TP2 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- A0-001 A-AD-265-000/AG-001 DHH 3-2. (2001). *Canadian Forces Dress Instructions*. Ottawa, ON: The Department of National Defence.
- A1-003 A-CR-005-001/AG-001 D Cdts 4. (Draft). *Royal Canadian Sea Cadets Dress Instructions*. Ottawa, ON: Department of National Defence.
- A2-030 CATO 40-03 D Cdts 4. (2005). *Army Cadet Ranks and Cadet Corps*. Ottawa, ON: Department of National Defence.

8. **Training Aids:**

- Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- Photocopies of annexes; and
- Tape.

9. **Learning Aids:** N/A.10. **Test Details:** N/A.11. **Remarks:** N/A.

**EO C207.02 – VISIT A ROYAL CANADIAN SEA/ARMY CADET CORPS OR AN AIR CADET SQUADRON**

1. **Performance:** Visit a Royal Canadian Sea/Army Cadet Corps or an Air Cadet Squadron
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine the conditions suitable for this training.
3. **Standard:** The cadet shall visit a cadet corps or squadron to identify:
  - a. the intra- and inter-elemental differences in cadet training;
  - b. the history and traditions of the following:
    - (1) the corps/squadron;
    - (2) the affiliated unit; and
    - (3) the sea/army element; and
  - c. trips/exchanges in which the corps/squadron has participated.
4. **Teaching Points:** The instructor is asked to:
  - a. conduct a tour of facilities of the corps/squadron;
  - b. identify the number of staff and cadets; and
  - c. describe the following:
    - (1) elemental mandatory training;
    - (2) history and traditions of:
      - (a) the element;
      - (b) the corps/squadron; and
      - (c) the affiliated unit; and
    - (3) some trips or exchanges in which the corps/squadron has participated.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Field Trip :               | 80 min |
| c. Total:                     | 90 min |
6. **Substantiation:** A field trip was chosen for this lesson as it will reinforce the cadet's knowledge of material previously taught in EO M207.01 (Identify Proficiency Level Two Training Opportunities), EO M207.02

(Recognize Historical Aspects of the Royal Canadian Air Cadets (RCAC)) and EO C107.04 (Participate in an Activity About the History of the Squadron) through participation in a tour.

7. **References:** N/A.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. If this EO is chosen as complementary training, it is recommended that EO C207.01 (Identify the Rank Structure of the Royal Canadian Sea and Army Cadets) be conducted before this tour.
  - b. This field trip can be completed on a supported day or during a complementary session.
  - c. There is no instructional guide for the lesson.

**EO C207.03 – DESCRIBE THE AFFILIATED UNIT**

1. **Performance:** Describe the Affiliated Unit
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** The cadet shall describe the affiliated unit.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Method              | Time   | Refs |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------|
| TP1 | Describe the affiliated unit, to include: <ol style="list-style-type: none"> <li>a. its size;</li> <li>b. its location;</li> <li>c. its role within the broader CF mandate;</li> <li>d. its formation date;</li> <li>e. the building(s) it occupies;</li> <li>f. selected affiliated unit traditions;</li> <li>g. previous and future deployments;</li> <li>h. any special awards/medals awarded to its members; and</li> <li>i. other interesting facts.</li> </ol> | Interactive Lecture | 25 min |      |
| TP2 | Conduct an activity on the affiliated unit.                                                                                                                                                                                                                                                                                                                                                                                                                          | In-Class Activity   | 10 min |      |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 25 min
  - c. In-Class Activity: 10 min
  - d. Total: 40 min
6. **Substantiation:**
  - a. An interactive lecture was chosen for TP1 to orient the cadets to the history of the affiliated unit and to generate interest.
  - b. An in-class activity was chosen for TP2 as it is an interactive way to provoke thought and stimulate interest in the history of the affiliated unit among cadets.

7. **References:** N/A.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. The instructor for this lesson may be a member of the squadron or the affiliated unit.
  - b. If the affiliated unit has access to promotional materials, these may be used as references and/or training/learning aids.
  - c. Topics found in TP1 may differ for each affiliated unit. The instructor should determine interesting facts of the affiliated unit prior to the lesson.
  - d. The posters created during this lesson may be used in a display at the annual ceremonial review.

**EO C207.04 – TOUR THE AFFILIATED UNIT**

1. **Performance:** Tour the Affiliated Unit
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine conditions suitable for this training.
3. **Standard:** The cadet shall tour the affiliated unit to gain an awareness of the Canadian Forces' (CF) responsibility for supporting the Cadet Program.
4. **Teaching Points:** The tour guide is asked to explain:
  - a. the size of the affiliated unit;
  - b. the role the affiliated unit plays within the broader CF mandate;
  - c. the formation date of the affiliated unit;
  - d. the building(s) occupied by the affiliated unit;
  - e. any deployments in which the affiliated unit has participated;
  - f. any special awards/medals awarded to members of the affiliated unit; and
  - g. any other interesting facts.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Field Trip :               | 80 min |
| c. Total:                     | 90 min |
6. **Substantiation:** A field trip was chosen for this lesson as it will enhance the cadet's knowledge of the broader mandate of the Canadian Forces.
7. **References:** N/A.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. This EO is only to be conducted by squadrons with an affiliated unit that is located within the local training location as described in para 4b(1) in CATO-11-04, *Cadet Program Outline*.

- b. Cadet squadron personnel are to determine whether a guide will escort the group or if an instructor from the squadron will be responsible for conducting the tour. If an instructor from the squadron will conduct the tour, all teaching points are to be researched in advance.
- c. This field trip can be completed on a supported day or during a complementary session.
- d. If the affiliated unit has access to promotional materials, these may be used as references and/ training/learning aids.
- e. There is no Instructional Guide for the lesson.

## SECTION 8

### PO 208 – EXECUTE DRILL AS A MEMBER OF A SQUAD

1. **Performance:** Execute Drill as a Member of a Squad
2. **Conditions:**
  - a. Given:
    - (1) words of command;
    - (2) supervision; and
    - (3) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: A drill hall or outdoor parade square in favourable weather.
3. **Standard:** In accordance with A-PD-201-000/PT-000, *The Canadian Forces Manual of Drill and Ceremonial*, the cadet will execute drill as a member of a squad, to include:
  - a. executing turns to the left and right on the march;
  - b. as a squad in threes, forming single file from the halt; and
  - c. as a squad in line, forming single file from the halt.
4. **Remarks:** Instructors are advised to conduct the EOs as listed, as subsequent EOs are dependent on previous EOs.
5. **Complementary Material:**
  - a. Complementary material associated with PO 208 is designed to allow additional opportunities for cadet squadrons with an interest in drill to develop the cadet's skills in this area specifically:
    - (1) EO C208.01 (Practice Ceremonial Drill as a Review) provided to allow practice of Proficiency Level One mandatory training; and
    - (2) EO C208.02 (Execute Drill With Arms).
  - b. Some complementary training offered in the Proficiency Level One Program may be selected as complementary training in the Proficiency Level Two Program, specifically EO C108.01 (Execute Supplementary Drill Movements). Drill movements will be selected from A-PD-201-000/PT-000, Chapters 2 or 3.
  - c. Complementary training associated with PO 208 is limited to a total of nine periods, of which a maximum of six periods may be used in support of EO C108.01 (Execute Supplementary Drill Movements) and EO C208.01 (Practice Ceremonial Drill as a Review), to be conducted during sessions or on a supported day. Squadrons are not required to use all nine periods.

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**EO M208.01 – EXECUTE LEFT AND RIGHT TURNS ON THE MARCH**

1. **Performance:** Execute Left and Right Turns on the March
2. **Conditions:**
  - a. Given:
    - (1) words of command;
    - (2) supervision; and
    - (3) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: A drill hall, or outdoor parade square in favourable weather.
3. **Standard:** In accordance with A-PD-201-000/PT-000, and as a member of a squad, the cadet shall execute left and right turns on the march.
4. **Teaching Points:**

| TP  | Description                                                                       | Method                        | Time   | Refs                       |
|-----|-----------------------------------------------------------------------------------|-------------------------------|--------|----------------------------|
| TP1 | Explain, demonstrate, and allow cadets time to practice left turns on the march.  | Demonstration and Performance | 25 min | A0-002 (pp. 3-29 and 3-30) |
| TP2 | Explain, demonstrate, and allow cadets time to practice right turns on the march. | Demonstration and Performance | 25 min | A0-002 (p. 3-31)           |

5. **Time:**
  - a. Introduction / Conclusion: 10 min
  - b. Demonstration and Performance: 50 min
  - c. Total: 60 min
6. **Substantiation:** Demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate turning on the march while providing an opportunity for the cadets to practice turning on the march under supervision.
7. **References:** A0-002 A-PD-201-000/PT-000 Directorate of History and Heritage 3-2. (2005). *The Canadian Forces Manual of Drill and Ceremonial*. Ottawa, ON: The Department of National Defence.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. It is recommended that ongoing feedback be provided during drill practices, weekly parade nights, and ceremonial parades.
  - b. Assistant instructors may be required for this lesson.

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**EO M208.02 – FORM SINGLE FILE FROM THE HALT**

1. **Performance:** Form Single File from the Halt
2. **Conditions:**
  - a. Given:
    - (1) words of command;
    - (2) supervision; and
    - (3) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: A drill hall, or outdoor parade square in favourable weather.
3. **Standard:** In accordance with A-PD-201-000/PT-000, and as a member of a squad, the cadet shall form single file from the halt, to include:
  - a. forming single file from the halt as a squad in threes; and
  - b. forming single file from the halt as a squad in line.
4. **Teaching Points:**

| TP  | Description                                                                                                | Method                        | Time   | Refs                       |
|-----|------------------------------------------------------------------------------------------------------------|-------------------------------|--------|----------------------------|
| TP1 | Explain, demonstrate, and allow cadets to practice forming single file from the halt as a squad in threes. | Demonstration and Performance | 15 min | A0-002 (pp. 3-43 and 3-44) |
| TP2 | Explain, demonstrate, and allow cadets to practice forming single file from the halt as a squad in line.   | Demonstration and Performance | 10 min | A0-002 (pp. 3-45 and 3-46) |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Demonstration and Performance: 25 min
  - c. Total: 30 min

6. **Substantiation:** Demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire while providing an opportunity for the cadets to practice forming single file from the halt under supervision.
7. **References:** A0-002 A-PD-201-000/PT-000 Directorate of History and Heritage 3-2. (2005). *The Canadian Forces Manual of Drill and Ceremonial*. Ottawa, ON: The Department of National Defence.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. It is recommended that ongoing feedback be provided during drill practices, weekly parade nights, and ceremonial parades.
  - b. Assistant instructors may be required for this lesson.

**EO C208.01 – PRACTICE CEREMONIAL DRILL AS A REVIEW**

1. **Performance:** Practice Ceremonial Drill as a Review
2. **Conditions:**
  - a. Given:
    - (1) words of command;
    - (2) supervision; and
    - (3) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: A drill hall, or outdoor parade square in favourable weather.
3. **Standard:** In accordance with A-PD-201-000/PT-000, the cadet shall participate in a review of ceremonial drill, chosen from EOs M108.01 to M108.11.
4. **Teaching Points:** As per reference.
5. **Time:**

|                                   |        |
|-----------------------------------|--------|
| a. Introduction / Conclusion:     | 10 min |
| b. Demonstration and Performance: | 50 min |
| c. Total:                         | 60 min |
6. **Substantiation:** Demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate ceremonial drill while providing an opportunity for the cadets to practice these skills under supervision.
7. **References:** A0-002 A-PD-201-000/PT-000 Directorate of History and Heritage 3-2. (2005). *The Canadian Forces Manual of Drill and Ceremonial*. Ottawa, ON: The Department of National Defence.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. It is recommended that ongoing feedback be provided during drill practices, weekly parade nights, and ceremonial parades.
  - b. A maximum of two periods have been allocated for this EO to review any mandatory drill from EOs M108.01 to M108.11.
  - c. Assistant instructors may be required for this lesson.
  - d. No instructional guide will be provided for this EO.

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**EO C208.02 – EXECUTE DRILL WITH ARMS**

1. **Performance:** Execute Drill with Arms
2. **Conditions:**
  - a. Given:
    - (1) words of command;
    - (2) drill purpose rifle;
    - (3) supervision; and
    - (4) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: A drill hall, or outdoor parade square in favourable weather.
3. **Standard:** In accordance with A-CR-CCP-053/PT-001, *Royal Canadian Sea Cadets Manual of Drill and Ceremonial*, Chapter 2, and as a member of a squad, the cadet shall execute drill with arms.
4. **Teaching Points:** As per reference.
5. **Time:**

|                                   |         |
|-----------------------------------|---------|
| a. Introduction / Conclusion:     | 10 min  |
| b. Demonstration and Performance: | 230 min |
| c. Total:                         | 240 min |
6. **Substantiation:** Demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate drill with arms while providing an opportunity for the cadets to practice these skills under supervision.
7. **References:** A0-038 A-CR-CCP-053/PT-001 D Cdts. (2000). *Royal Canadian Sea Cadets Manual of Drill and Ceremonial*. Ottawa, ON: Department of National Defence.
8. **Training Aids:** Drill purpose rifle.
9. **Learning Aids:** Drill purpose rifle.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Assistant instructors may be required to provide demonstrations for this lesson.
  - b. The recommended basic breakdown of basic drill with arms lessons is as follows:
    - (1) adopt the positions of attention, stand at ease, and stand easy with arms, to include (one period):
      - (a) the position of attention;
      - (b) stand at ease from attention;
      - (c) stand easy from stand at ease;

- (d) stand at ease from stand easy; and
    - (e) attention from stand at ease;
  - (2) execute ground and take up arms (one period);
  - (3) execute slope arms from the order and order arms from the slope (one period);
  - (4) execute dressing a squad with arms (one period);
  - (5) execute paying compliments with arms at the halt, to include (two periods):
    - (a) salute at slope arms;
    - (b) present arms from the slope; and
    - (c) slope arms from the present; and
  - (6) march and halt in quick time with arms (one period).
- c. No instructional guide will be provided for this EO.

## SECTION 9

### PO C211A – PARTICIPATE IN COMPETITIVE SUMMER BIATHLON ACTIVITIES

1. **Performance:** Participate in Competitive Summer Biathlon Activities
2. **Conditions:**
  - a. Given:
    - (1) cadet air rifle;
    - (2) safety glasses/goggles;
    - (3) approved cadet air rifle pellets;
    - (4) containers to hold pellets;
    - (5) biathlon Air Rifle Target (BART);
    - (6) local Range Standing Orders;
    - (7) supervision; and
    - (8) assistance as required.
  - b. Denied: N/A.
  - c. Environmental:
    - (1) Air rifle range constructed IAW A-CR-CCP-177/PT-001, Chapter 1, Section 8; and
    - (2) Established running route of approximately 500-1000 m.
3. **Standard:** In accordance with specified references and, as a member of a section, the cadet will participate in competitive summer biathlon activities, to include:
  - a. running a loop of 500-1000 m;
  - b. firing eight rounds in an effort to activate all five targets of the BART;
  - c. running a second loop of 500-1000 m;
  - d. firing eight rounds in an effort to activate all five targets of the BART;
  - e. running a final loop of 500-1000 m; and
  - f. finishing the event.
4. **Remarks:**
  - a. Cadets must have completed PO C111 (Participate in a Summer Biathlon Activity) prior to competing in the competitive summer biathlon activity.
  - b. Assistance may be given to cadets who have difficulty pumping the cadet air rifle.
  - c. All range activities must be conducted by a Range Safety Officer (RSO).
5. **Complementary Material:**
  - a. PO 211 (Participate in Competitive Summer Biathlon Activities) is a complementary package designed to provide an opportunity for the cadet to participate in competitive summer biathlon activities.

- b. Squadrons choosing PO 211 as complementary training may complete EOs C211.01-C211.03 or the complete package, EOs C211.01-C211.04. Squadrons cannot conduct EO C211.04 (Participate in a Competitive Summer Biathlon Activity), unless cadets have completed EOs C211.01-C211.03.
- c. Complementary training associated with PO 211 is limited to a total of nine periods which may be conducted during sessions or on a supported day.

**EO C211.01 – IDENTIFY CIVILIAN BIATHLON OPPORTUNITIES**

1. **Performance:** Identify Civilian Biathlon Opportunities
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify civilian biathlon opportunities, to include:
  - a. training opportunities; and
  - b. competitive events.

4. **Teaching Points:**

| TP  | Description                                                                                              | Method              | Time   | Refs                       |
|-----|----------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------|
| TP1 | Introduce local, provincial/territorial, national, and international biathlon training opportunities.    | Interactive Lecture | 10 min | C0-082<br>C0-148<br>C0-149 |
| TP2 | Introduce local, provincial/territorial, national, and international competitive biathlon opportunities. | Interactive Lecture | 10 min | C0-082<br>C0-148           |
| TP3 | Identify famous biathletes who were introduced to the sport through the Canadian Cadet Program.          | Interactive Lecture | 5 min  | A0-049<br>C0-082<br>C0-153 |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 25 min
  - c. Total: 30 min
6. **Substantiation:** An interactive lecture was chosen for this lesson to orient the cadets to civilian biathlon opportunities and to generate interest.
7. **References:**
  - a. A0-042 Regional Cadet Support Unit (Central). (2007). *Cadet Marksmanship and Firearms Safety Program*. Retrieved 18 April 2007, from [http://www.central.cadets.ca/events/biath\\_cadetmarksman\\_e.html](http://www.central.cadets.ca/events/biath_cadetmarksman_e.html).

- b. C0-082 Biathlon Canada. (2007). *Biathlon Canada*. Retrieved 12 February 2007, from <http://www.biathloncanada.ca>.
  - c. C0-148 International Biathlon Union. (2007). *International Biathlon Union*. Retrieved 18 April 2007, from <http://www.biathlonworld.com>.
  - d. C0-149 Biathlon Canada. (2005). *Biathlon Bears: Community Coaching*. Ottawa, ON: Biathlon Canada.
  - e. C0-153 Library and Archives Canada. (2000). *Myriam Bédard*. Retrieved 30 April 2007, from <http://www.collectionscanada.ca/women/002026-223-e.html>.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

**EO C211.02 – RUN ON ALTERNATING TERRAIN**

1. **Performance:** Run on Alternating Terrain
2. **Conditions:**
  - a. Given:
    - (1) supervision; and
    - (2) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Training area of alternating terrain large enough to set up a running course of 20-40 m.
3. **Standard:** In accordance with specified references, the cadet shall:
  - a. participate in a warm-up;
  - b. practice running on alternating terrain; and
  - c. participate in a cool-down.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                   | Method              | Time  | Refs                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------------------------------------|
| TP1 | Describe running techniques for alternating terrain, to include: <ol style="list-style-type: none"> <li>a. posture/body alignment;</li> <li>b. foot position; and</li> <li>c. endurance.</li> </ol>                                                                                                                                                                                                           | Interactive Lecture | 5 min | C0-080                               |
| TP2 | Conduct a warm-up session, composed of light cardiovascular exercises, meant to: <ol style="list-style-type: none"> <li>a. stretch the muscles;</li> <li>b. gradually increase respiratory action and heart rate;</li> <li>c. expand the muscles' capillaries to accommodate the increase in blood circulation; and</li> <li>d. raise muscle temperature to facilitate reactions in muscle tissue.</li> </ol> | Practical Activity  | 5 min | C0-002<br>(pp. 109 to 113)<br>C0-089 |
| TP3 | Supervise while cadets run on alternating terrain.                                                                                                                                                                                                                                                                                                                                                            | Practical Activity  | 5 min |                                      |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                           | Method              | Time  | Refs                              |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|-----------------------------------|
| TP4 | Conduct a cool-down session, composed of light cardiovascular exercises, meant to: <ul style="list-style-type: none"> <li>a. allow the body time to slowly recover from physical activity and to help prevent injury;</li> <li>b. prepare the respiratory and cardiovascular systems to return to their normal state; and</li> <li>c. stretch the muscles.</li> </ul> | Practical Activity  | 5 min | C0-002 (pp. 109 to 113)<br>C0-089 |
| TP5 | Describe how to create and implement a running schedule.                                                                                                                                                                                                                                                                                                              | Interactive Lecture | 5 min | C0-146                            |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 10 min |
| c. Practical Activity:        | 15 min |
| d. Total:                     | 30 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TPs 1 and 5 to introduce the cadets to running techniques on alternating terrain and on how to implementing a running program.
- b. A practical activity was chosen for TPs 2-4 as it is an interactive way to introduce the cadets to running on alternating terrain in a safe and controlled environment.

7. **References:**

- a. C0-002 (ISBN 0-88962-630-8) LeBlanc, J. and Dickson, L. (1997). *Straight Talk About Children and Sport: Advice for Parents, Coaches, and Teachers*. Oakville, ON and Buffalo, NY: Mosaic Press.
- b. C0-057 Martha Jefferson Hospital. (2001). *Warm-ups*. Retrieved 16 October 2006, from <http://www.marthajefferson.org/warmup.php>.
- c. C0-058 Webb Physiotherapists Inc. (ND). *Running Exercises*. Retrieved 26 October 2006 from <http://www.physioline.co.za/conditions/article.asp?id=46>.
- d. C0-059 Webb Physiotherapists Inc. (ND). *Exercise Programme for Squash, Tennis, Softball, Handball*. Retrieved 25 October 2006 from <http://www.physioline.co.za/conditions/article.asp?id=49>.
- e. C0-060 Impacto Protective Products Inc. (1998). *Exercises*. Retrieved 25 October 2006, from <http://www.2protect.com/work3b.htm>.
- f. C0-061 City of Saskatoon, Community Services Department. (ND). *Stretch Your Limits: A Smart Guide to Stretching for Fitness*. Retrieved 26 October 2006, from <http://in-motion.ca/walkingworkout/plan/flexibility/>.
- g. C0-080 Cool Running. (2007). *Fitness and Performance*. Retrieved 12 February 2007, from [http://www.coolrunning.com/engine/2/2\\_3/181.shtml](http://www.coolrunning.com/engine/2/2_3/181.shtml).
- h. C0-089 (ISBN 0-936070-22-6) Anderson, B. (2000). *Stretching: 20<sup>th</sup> Anniversary* (Rev. ed.). Bolinas, CA: Shelter Publications, Inc.

- i. C0-146 Will-Weber, M. (2006). *Runner's World: Beginner's: Training: First Steps*. Retrieved 18 April 2007, from <http://www.runnersworld.com/article/printer/1,7124,s6-380-381-386-678-0,00.html>.
  - j. C0-154 Hansen, B. (1999). *Moving on the Spot: Fun and Physical Activity: A Collection of 5 Minute Stretch and Movement Sessions*. Retrieved 26 October 2006, from <http://lin.ca/resource/html/dn3.htm#l1>.
8. **Training Aids:**
- a. Presentation aids (e.g. whiteboard/flipchart) appropriate for the training area; and
  - b. Whistle.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** Stairs may be used in place of alternating terrain.

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**EO C211.03 – FIRE THE CADET AIR RIFLE USING A SLING FOLLOWING PHYSICAL ACTIVITY**

1. **Performance:** Fire the Cadet Air Rifle Using a Sling Following Physical Activity
2. **Conditions:**
  - a. Given:
    - (1) cadet air rifle;
    - (2) cadet air rifle sling;
    - (3) biathlon air rifle target (BART);
    - (4) safety glasses/goggles;
    - (5) Shooting Mat;
    - (6) supervision; and
    - (7) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall fire the cadet air rifle using the cadet air rifle sling following physical activity.
4. **Teaching Points:**

| TP  | Description                                                                                                             | Method              | Time   | Refs                              |
|-----|-------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-----------------------------------|
| TP1 | In accordance with EO C206.01 (Practice Holding Techniques), review holding techniques using the cadet air rifle sling. | Interactive Lecture | 5 min  | A0-027 (pp. 2-7 and 2-8)          |
| TP2 | Conduct a warm-up session composed of light cardiovascular exercises.                                                   | Practical Activity  | 5 min  | C0-002 (pp. 109 to 113)<br>C0-089 |
| TP3 | Conduct an activity where cadets will fire the cadet air rifle using a sling following physical activity.               | Practical Activity  | 10 min |                                   |
| TP4 | Conduct a cool-down session composed of light cardiovascular exercises.                                                 | Practical Activity  | 5 min  | C0-002 (pp. 109 to 113)<br>C0-089 |

5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 5 min  |
| c. Practical Activity:        | 20 min |
| d. Total:                     | 30 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to review holding techniques using the cadet air rifle sling.
- b. A practical activity was chosen for TP2-4 as it is an interactive way to allow the cadets to experience firing the cadet air rifle using a sling following physical activity.

7. **References:**

- a. A0-027 A-CR-CCP-177/PT-001 D Cdts 3. (2001). *Cadet Marksmanship Program: Reference Manual*. Ottawa, ON: Department of National Defence.
- b. C0-002 (ISBN 0-88962-630-8) LeBlanc, J. and Dickson, L. (1997). *Straight Talk About Children and Sport: Advice for Parents, Coaches, and Teachers*. Oakville, ON and Buffalo, NY: Mosaic Press.
- c. C0-057 Martha Jefferson Hospital. (2001). *Warm-ups*. Retrieved 16 October 2006, from <http://www.marthajefferson.org/warmup.php>.
- d. C0-058 Webb Physiotherapists Inc. (ND). *Running Exercises*. Retrieved 26 October 2006 from <http://www.physioline.co.za/conditions/article.asp?id=46>.
- e. C0-059 Webb Physiotherapists Inc. (ND). *Exercise Programme for Squash, Tennis, Softball, Handball*. Retrieved 25 October 2006 from <http://www.physioline.co.za/conditions/article.asp?id=49>.
- f. C0-060 Impacto Protective Products Inc. (1998). *Exercises*. Retrieved 25 October 2006, from <http://www.2protect.com/work3b.htm>
- g. C0-061 City of Saskatoon, Community Services Department. (2006). *Stretch Your Limits: A Smart Guide to Stretching For Fitness*. Retrieved 26 October 2006, from <http://in-motion.ca/walkingworkout/plan/flexibility/>.
- h. C0-080 Cool Running. (2007). *Cool Running*. Retrieved 12 February 2007, from [http://www.coolrunning.com/engine/2/2\\_3/181.shtml](http://www.coolrunning.com/engine/2/2_3/181.shtml).
- i. C0-085 Daisy Outdoor Products. (2006). *AVANTI competition pellet rifle: Operation manual: AVANTI legend model 853*. Rogers, AR: Daisy Outdoor Products.
- j. C0-089 (ISBN 0-936070-22-6) Anderson, B. (2000). *Stretching: 20<sup>th</sup> anniversary* (Rev. ed.). Bolinas, CA: Shelter Publications, Inc.
- k. C0-154 Hansen, B. (1999). *Moving on the Spot: Fun and Physical Activity: A Collection of 5 Minute Stretch and Movement Sessions*. Retrieved 26 October 2006, from <http://lin.ca/resource/html/dn3.htm#1>.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- b. Shooting mats;

- c. Cadet air rifle; and
  - d. Cadet air rifle sling.
9. **Learning Aids:**
- a. Cadet air rifle;
  - b. Biathlon air rifle target (BART);
  - c. Safety glasses/goggles;
  - d. Target frames; and
  - e. Cadet air rifle sling.
10. **Test Details:** N/A.
11. **Remarks:** EO C206.01 must be completed prior to this lesson.

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**EO C211.04 – PARTICIPATE IN A COMPETITIVE SUMMER BIATHLON ACTIVITY**

1. **Performance:** Participate in a Competitive Summer Biathlon Activity
2. **Conditions:**
  - a. Given:
    - (1) cadet air rifle;
    - (2) cadet air rifle sling;
    - (3) safety glasses/goggles;
    - (4) .177 air rifle pellets;
    - (5) biathlon air rifle target (BART);
    - (6) supervision; and
    - (7) assistance as required.
  - b. Denied: N/A.
  - c. Environmental:
    - (1) Air rifle range constructed IAW A-CR-CCP-177/PT-001; and
    - (2) Running route of approximately 500-1000 m on alternating terrain.
3. **Standard:** In accordance with specified references, the cadet shall participate in a recreational summer biathlon activity, to include:
  - a. running a route of 500-1000 m;
  - b. shooting five to eight rounds in an effort to activate all five targets of the BART;
  - c. running a second route of 500-1000 m;
  - d. shooting five to eight rounds in an effort to activate all five targets of the BART;
  - e. running a final route of 500-1000 m; and
  - f. finishing the race.
4. **Teaching Points:**
  - a. Explain the components of the competitive summer biathlon activity, to include:
    - (1) course layout;
    - (2) rules and regulations;
    - (3) scoring;
    - (4) penalties; and
    - (5) out of bounds areas.
  - b. Conduct a warm-up session, composed of light cardiovascular activities, meant to:
    - (1) stretch the muscles;
    - (2) gradually increase respiratory action and heart rate;

- (3) expand the muscles' capillaries to accommodate the increase in blood circulation; and
- (4) raise muscle temperature to facilitate reactions in muscle tissue.

- c. Conduct a competitive summer biathlon activity in accordance with paragraph 3. Details on course/ range set-up are included in A-CR-CCP-802/PF-001.
- d. Conduct a cool-down session, composed of light cardiovascular activities, meant to:
  - (1) allow the body time to slowly recover from physical activity and to help prevent injury;
  - (2) prepare the respiratory and cardiovascular systems to return to their normal state; and
  - (3) stretch the muscles.

5. **Time:**

- |                               |         |
|-------------------------------|---------|
| a. Introduction / Conclusion: | 10 min  |
| b. Interactive Lecture:       | 15 min  |
| c. Practical Activity:        | 155 min |
| d. Total:                     | 180 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to illustrate the application of rules, principles and concepts of a summer biathlon.
- b. A practical activity was chosen for TP2-4 as it is an interactive way to introduce cadets to summer biathlon. This activity contributes to the development of these skills and knowledge in a fun and challenging setting.

7. **References:**

- a. A0-027 A-CR-CCP-177/PT-001 D Cdts 3. (2001). *Cadet Marksmanship Program: Reference Manual*. Ottawa, ON: Department of National Defence.
- b. A0-032 Cadets Canada. (2002). *Biathlon Competition Rules And IBU/Cadet Disciplinary Rules*. Ottawa, ON: Department of National Defence.
- c. A0-036 Cadets Canada. (ND). *Canadian Cadet Movement: Biathlon Championship Series*. Ottawa, ON: Department of National Defence.
- d. C0-002 (ISBN 0-88962-630-8) LeBlanc, J. and Dickson, L. (1997). *Straight Talk About Children and Sport: Advice for Parents, Coaches, And Teachers*. Oakville, ON and Buffalo, NY: Mosaic Press.
- e. C0-057 Martha Jefferson Hospital. (2001). *Warm-ups*. Retrieved 26 October 2006, from <http://www.marthajefferson.org/warmup.php>.
- f. C0-058 Webb Physiotherapists Inc. (ND). *Running Exercises*. Retrieved 26 October 2006, from <http://www.physionline.co.za/conditions/article.asp?id=46>.
- g. C0-059 Webb Physiotherapists Inc. (ND). *Exercise Programme for Squash, Tennis, Softball, Handball*. Retrieved 25 October 2006, from <http://www.physionline.co.za/conditions/article.asp?id=49>.
- h. C0-060 Impacto Protective Products Inc. (1998). *Exercises*. Retrieved 25 October 2006, from <http://www.2protect.com/work3b.htm>.

- i. C0-061 City of Saskatoon, Community Services Department. (2006). *Stretch Your Limits: A Smart Guide to Stretching For Fitness*. Retrieved 26 October 2006, from <http://www.in-motion.ca/walkingworkout/plan/flexibility/>.
- j. C0-089 (ISBN 0-936070-22-6) Anderson, B. (2000). *Stretching: 20<sup>th</sup> Anniversary* (Rev. ed.). Bolinas, CA: Shelter Publications, Inc.
- k. C0-154 Hansen, B. (1999). *Moving on the Spot: Fun And Physical Activity: A Collection of 5 Minute Stretch and Movement Sessions*. Retrieved 26 October 2006, from <http://lin.ca/resource/html/dn3.htm#1>.

8. **Training Aids:**

- a. Cadet air rifle (one per firing point);
- b. Cadet air rifle sling (one per firing point);
- c. Safety glasses/goggles (one per firing point);
- d. Shooting mat (two per firing point);
- e. Target frame (one per firing point);
- f. BART (one per firing point);
- g. Biathlon scoresheets located at A-CR-CCP-802/PF-001, Annex C;
- h. Course control sheets located at A-CR-CCP-802/PF-001, Annex C;
- i. Range recording sheets located at A-CR-CCP-802/PF-001, Annex C;
- j. Notice board; and
- k. Stopwatches.

9. **Learning Aids:**

- a. Cadet air rifle;
- b. Cadet air rifle sling;
- c. Safety glasses/goggles;
- d. Shooting mats;
- e. Target frame;
- f. .177 air rifle pellets;
- g. Container to hold pellets;
- h. Target frame; and
- i. BART.

10. **Test Details:** N/A.

11. **Remarks:**

- a. Results should be posted for cadets to review. PO 211 is a complementary training activity. It is designed to provide an opportunity for the cadets to participate in a competitive summer biathlon activity.

- b. EOs C111.01 (Participate in a Biathlon Briefing), C111.02 (Run Short Wind Sprints), C111.03 (Introduction to Summer Biathlon Marksmanship Skills Using the Cadet Air Rifle), C211.01 (Identify Civilian Biathlon Opportunities), C211.02 (Run on Alternating Terrain), and C211.03 (Fire the Cadet Air Rifle Using the Cadet Air Rifle Sling Following Physical Activity) shall be taught prior to instructing this lesson.

## **SECTION 10**

### **PO X20 – PARTICIPATE IN CAF FAMILIARIZATION ACTIVITIES**

This PO and its associated EOs are located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*.

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## SECTION 11

### PO 230 – DISCUSS CANADIAN AVIATION HISTORY

1. **Performance:** Discuss Canadian Aviation History
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Any conditions.
3. **Standard:** In accordance with specified references, the cadet shall discuss Canadian aviation history as it pertains to:
  - a. the Battle of Britain;
  - b. Remembrance Day;
  - c. the Battle of the Atlantic; and
  - d. D-Day (Normandy – June 6, 1944).
4. **Remarks:** Cadets will participate in a discussion to enhance their knowledge of these historical events prior to the parade dates.
5. **Complementary Material:**
  - a. Complementary material associated with PO 230 is designed to enhance the cadet's knowledge of historical Canadian aviation events:
    - (1) EO C230.01 (Participate on Presentation Given by a Member of the Memory Project Speakers Bureau);
    - (2) EO C230.02 (Tour a Local Aviation Museum);
    - (3) EO C230.03 (Discuss Significant Canadian Historical Events Relative to Aviation); and
    - (4) EO C130.03 (Watch On *Canadian Wings* Video).
  - b. Some complementary training offered in Proficiency Level One may be selected as complementary training in Proficiency Level Two, specifically EO C130.03 (Watch On *Canadian Wings* Video).
  - c. Complementary training associated with PO 230 is limited to a total of 6 periods, which may be conducted during sessions or on a supported day. Squadrons are not required to use all 6 periods.

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**EO M230.01 – DISCUSS AIRCRAFT FLOWN DURING WWI AND WWII**

1. **Performance:** Discuss Aircraft Flown During WWI and WWII
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall discuss aircraft flown during WWI and WWII battles, to include:
  - a. the Battle of the Atlantic; and
  - b. the Battle of Britain.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                              | Method              | Time  | Refs                       |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|----------------------------|
| TP1 | Discuss the aircraft flown during WWI, to include: <ol style="list-style-type: none"> <li>a. the Sopwith Triplane; and</li> <li>b. the Bristol F.2B Fighter “Brisfit”.</li> </ol>                                                                                                                                        | Interactive Lecture | 5 min | C3-103                     |
| TP2 | Discuss the importance of the Battle of the Atlantic, to include: <ol style="list-style-type: none"> <li>a. the duration of the battle from Sept 1, 1939–May 8, 1945; and</li> <li>b. the battle between Allied Forces and Axis powers for control of the sea routes between the Americas, Europe and Africa.</li> </ol> | Interactive Lecture | 5 min | A3-038<br>A3-039<br>C3-079 |
| TP3 | Discuss the aircraft flown during the Battle of the Atlantic, to include: <ol style="list-style-type: none"> <li>a. B-24 Liberator Bombers; and</li> <li>b. the Curtiss Kittyhawk Mk.1 Fighter-Bomber.</li> </ol>                                                                                                        | Interactive Lecture | 5 min | A3-038<br>A3-039           |
| TP4 | Discuss the importance of the Battle of Britain, to include: <ol style="list-style-type: none"> <li>a. the duration of the battle fought from August 8, 1940–October 31, 1940; and</li> <li>b. the battle between the Allied Forces and Axis powers.</li> </ol>                                                          | Interactive Lecture | 5 min | C3-078                     |

| TP  | Description                                                                                                                            | Method              | Time  | Refs   |
|-----|----------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------|
| TP5 | Discuss the aircraft flown during the Battle of Britain, to include:<br>a. the Hawker Hurricane Mark 1; and<br>b. the Spitfire Mark 1. | Interactive Lecture | 5 min | C3-078 |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 25 min |
| c. | Total:                     | 30 min |

6. **Substantiation:** An interactive lecture was chosen for this lesson to present background material to the cadets and promote an interest in aircraft flown during WWI and WWII.7. **References:**

- a. A3-038 VAC Canada Remembers. (1998). *The Battle of the Atlantic*. Retrieved 19 February 2007, from <http://www.vac-acc.gc.ca/remember/sub.cfm?source=history/secondwar/canada2/batat1>.
- b. A3-039 Canada's Air Force. (2004). *World War II – 1939-45*. Retrieved 19 February 2007, from [http://www.airforce.forces.ca/hist/ww\\_2\\_e.asp](http://www.airforce.forces.ca/hist/ww_2_e.asp).
- c. C3-078 Canadian War Museum. (2004). *The Invasion Threat to Britain and the Battle of Britain, 1940*. Retrieved 16 February 2007, from [http://www.warmuseum.ca/cwm/newspapers/operations/Britain\\_e.html](http://www.warmuseum.ca/cwm/newspapers/operations/Britain_e.html).
- d. C3-079 Canadian War Museum. (2004). *The Battle of the Atlantic*. Retrieved 9 February 2007, from [http://www.warmuseum.ca/cwm/newspapers/operations/atlantic\\_e.html](http://www.warmuseum.ca/cwm/newspapers/operations/atlantic_e.html).
- e. C3-103 Ace Pilots. (2007). *Legendary Aviators and Aircraft of World War One*. Retrieved 26 February 2007, from <http://www.acepilots.com/wwi/main.html>.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.9. **Learning Aids:** N/A.10. **Test Details:** N/A.11. **Remarks:** If the squadron is participating in the parades listed in TP2 and TP4 this EO should be conducted prior to the parade dates.

**EO M230.02 – DISCUSS SIGNIFICANT EVENTS IN 20TH CENTURY CANADIAN MILITARY HISTORY**

1. **Performance:** Discuss Significant Events in 20<sup>th</sup> Century Canadian Military History
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall discuss significant events in 20<sup>th</sup> century Canadian military history, to include:
  - a. Armistice Day (Remembrance Day); and
  - b. D-Day.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Method              | Time   | Refs                                 |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------------------|
| TP1 | Discuss the importance of Armistice Day (Remembrance Day), to include: <ol style="list-style-type: none"> <li>a. explaining that an annual day of commemoration for Canada's war dead began after the First World War;</li> <li>b. explaining what the term Armistice Day denotes; and</li> <li>c. explaining the name change from Armistice Day to Remembrance Day in 1931. The term Remembrance Day is a more flexible and inclusive term which accommodates the remembrance of war dead from WWI, WWII, the Korean War, other conflicts, and peacekeeping.</li> </ol> | Interactive Lecture | 10 min | A3-042<br>C3-080<br>C3-081<br>C3-126 |
| TP2 | Discuss how Canadians commemorate Remembrance Day by organizing ceremonies yearly at cenotaphs in cities and towns across the country.                                                                                                                                                                                                                                                                                                                                                                                                                                   | Interactive Lecture | 5 min  | C3-081                               |
| TP3 | Discuss the importance of D-Day, to include: <ol style="list-style-type: none"> <li>a. June 6, 1944 - the conflict between the Allied Forces and Germany. The Allied forces landed on the open beaches of Normandy, north and west of the city of Caen; and</li> <li>b. Canadian soldiers landing at Juno beach.</li> </ol>                                                                                                                                                                                                                                              | Interactive Lecture | 5 min  | A3-040<br>A3-041<br>C3-083           |

| TP  | Description                                                                                                                           | Method              | Time  | Refs                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------------------------------------|
| TP4 | Discuss aircraft flown during D-Day, to include:<br>a. Black and white striped MK 1XB;<br>b. Halifax LW170; and<br>c. RCAF Lancaster. | Interactive Lecture | 5 min | A3-033<br>A3-040<br>A3-041<br>C3-082 |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 25 min |
| c. Total:                     | 30 min |

6. **Substantiation:** An interactive lecture was chosen for this lesson to present background material to the cadets and promote an interest in aircraft flown during significant events in history.7. **References:**

- a. A3-033 *Canada's Air Force, Aircraft: Historical Aircraft*. (2006) Retrieved 31 October 2006, from [http://www.airforce.forces.gc.ca/equip/historical/hist\\_e.asp](http://www.airforce.forces.gc.ca/equip/historical/hist_e.asp).
- b. A3-040 Halifax 57 Rescue. (Canada). *LW170 Proposal*. Retrieved 20 February 2007, from [http://www.57rescuecanada.com/LocatingLW170/LW170\\_Proj\\_Proposal.htm](http://www.57rescuecanada.com/LocatingLW170/LW170_Proj_Proposal.htm).
- c. A3-041 DND. (2005). *D-day*. Retrieved 20 February 2007, from [http://forces.gc.ca/site/Feature-Story/2003/jun03/06\\_f\\_e.asp](http://forces.gc.ca/site/Feature-Story/2003/jun03/06_f_e.asp).
- d. A3-042 Milberry, L. and Halliday, H. (1990). *The Royal Canadian Air Force at War 1939-1945*. Toronto, ON: CANAV Books.
- e. A3-043 National Defence. (2004). *Halifax Bomber*. Retrieved 22 March 2007, from [http://www.airforce.gc.ca/equip/historical/Halifax\\_e.asp](http://www.airforce.gc.ca/equip/historical/Halifax_e.asp).
- f. C3-080 Canada War Museum. (2003). *Remembrance Day: Armistice Day*. Retrieved 19 February 2007, from [http://www.warmuseum.ca/cwm/remember/armisticeday\\_e.html](http://www.warmuseum.ca/cwm/remember/armisticeday_e.html).
- g. C3-081 Canada War Museum. (2003). *Remembrance Day: Armistice Day Becomes Remembrance Day*. Retrieved 19 February 2007, from [http://www.warmuseum.ca/cwm/remember/1931remembrance\\_e.html](http://www.warmuseum.ca/cwm/remember/1931remembrance_e.html).
- h. C3-082 Rich Thistle Studio. (1993). *The Fire at Canadian Warplane Heritage Museum*. Retrieved 20 February 2007, from [http://www.richthistle.com/article\\_include.php?i=a12\\_into\\_the\\_blue.php](http://www.richthistle.com/article_include.php?i=a12_into_the_blue.php).
- i. C3-083 Canada War Museum. (2003). *D-Day and the Normandy Campaigns*. Retrieved 16 February 2007, from [http://www.civilization.ca/cwm/newspapers/operations/ddaynormandy\\_e.html](http://www.civilization.ca/cwm/newspapers/operations/ddaynormandy_e.html).
- j. C3-126 Brigadier C.N. Barclay. (1968). *Armistice 1918*. London, UK: Dent, J. M. & Sons LTD.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** This class should be taught before the Remembrance Day parade so cadets may gain an appreciation and full understanding of the significance behind this event.

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## EO C230.01 – PARTICIPATE IN A PRESENTATION GIVEN BY A MEMBER OF THE MEMORY PROJECT SPEAKERS BUREAU

1. **Performance:** Participate in a Presentation Given by a Member of the Memory Project Speakers Bureau
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities large enough to accommodate the entire group.
3. **Standard:** The cadet shall participate in a presentation given by a member of the Memory Project Speakers Bureau so that they may further develop their knowledge of Canadian aviation history.
4. **Teaching Points:** The guest speaker is asked to:
  - a. present their years of service;
  - b. describe highlights of their military career;
  - c. relate anecdotes linking their service to aviation history; and
  - d. bring items to display, to include:
    - (1) uniforms;
    - (2) photographs;
    - (3) medals;
    - (4) letters; and
    - (5) any other items of interest.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 55 min |
| c. Total:                     | 60 min |

6. **Substantiation:** The interactive lecture was chosen for this lesson to orient the cadets to the topic and generate an interest in aviation history.
7. **References:** N/A.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/presentation area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Training aids should be determined by contacting the speaker prior to the presentation.
  - b. There is no instructional guide for this EO.
  - c. When requesting a speaker, squadrons will use the "Request a Speaker" form on the Dominion Institute's Website <http://thememoryproject.com/index.asp>
  - d. If resources permit, squadron staff should research and display the digital archives from the Dominion Institute's Website.

**EO C230.02 – TOUR A LOCAL AVIATION MUSEUM**

1. **Performance:** Tour a Local Aviation Museum
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer shall determine the conditions suitable for this training.
3. **Standard:** The cadet shall tour a local aviation museum to gain knowledge of Canadian aviation history.
4. **Teaching Points:** The tour guide is asked to explain:
  - a. aircraft flown during WWI and WWII;
  - b. aircraft flown during significant events in history, to include:
    - (1) Battle of the Atlantic; and
    - (2) Battle of Britain; and
  - c. the significance of ceremonial parades, to include:
    - (1) Armistice Day (Remembrance Day); and
    - (2) D-Day.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Field Trip :               | 80 min |
| c. Total:                     | 90 min |
6. **Substantiation:** A field trip was chosen for this lesson to reinforce the cadet's knowledge of material previously taught in EO M230.01 (Discuss Aircraft Flown During WWI and WWII) and EO M230.02 (Discuss Significant Events in 20<sup>th</sup> Century Canadian Military History) through participation in a tour.
7. **References:** N/A.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Cadet squadron personnel are to determine whether a guide will escort the group or if an instructor from the squadron will be responsible for conducting the tour, all teaching points are to be researched in advance.
  - b. This field trip can be completed on a supported day or during a complementary session.

- c. Any museum with an aviation display would be sufficient for completion of this EO. Contact the museum in advance to determine conditions for this tour.
- d. There is no instructional guide for this EO.

**EO C230.03 – DISCUSS SIGNIFICANT CANADIAN HISTORICAL EVENTS RELATIVE TO AVIATION**

1. **Performance:** Discuss Significant Canadian Historical Events Relative to Aviation
2. **Conditions:**
  - a. Given:
    - (1) *On Canadian Wings* Video or DVD;
    - (2) TV;
    - (3) VCR or DVD player;
    - (4) Supervision; and
    - (5) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities large enough to accommodate the entire group.
3. **Standard:** In accordance with *On Canadian Wings* [Series], the cadet shall discuss significant Canadian historical events relative to aviation.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                    | Method                      | Time   | Refs   |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------|--------|
| TP1 | <p>Explain the purpose of the <i>On Canadian Wings</i> videos, which assist Canadians in developing an appreciation for Canadian Aviation history and significant historical events.</p> <p>Show a series of video clips, which are relevant to this particular PO and lead a discussion on the subject presented in each.</p> | Activity / Group Discussion | 25 min | C3-039 |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Activity / Group Discussion: 25 min
  - c. Total: 30 min
6. **Substantiation:**
  - a. The activity was selected to allow for maximum participation in the learning process.
  - b. The group discussion method was chosen to allow cadets to share their knowledge, opinions, and feelings about the subject matter while still allowing the instructor to control the direction of the discussion. The instructor must ensure that points not brought forth by the class are presented. If the instructor follows the instructional guide, including the questions posed, this will allow the cadets to express, in their own words, what they learned from this lesson and how they may apply the information.

7. **References:** C3-039 Squires, C. (1999). *On Canadian Wings* [Series]. Winnipeg, MB: PWGSC.
8. **Training Aids:**
  - a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
  - b. *On Canadian Wings* videos; and
  - c. TV/VCR or DVD player.
9. **Learning Aids:** *On Canadian Wings* video.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

**SECTION 12****PO 231 – EXPLAIN PRINCIPLES OF FLIGHT**

1. **Performance:** Explain Principles of Flight
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Any conditions.
3. **Standard:** In accordance with specified references, the cadet will explain the principles of flight by:
  - a. identifying the four forces that act upon an aircraft;
  - b. describing the production of lift;
  - c. describing the types of drag;
  - d. describing aircraft axis movement; and
  - e. describing aircraft control surfaces.
4. **Remarks:** N/A.
5. **Complementary Material:**
  - a. Complementary material associated with PO 231 is designed to enhance the cadet's knowledge of principles of flight:
    - (1) EO C231.01 (Operate an Experimental Wing);
    - (2) EO C231.02 (Fly a Paper Colditz Glider);
    - (3) EO C231.03 (Tour a Flight School);
    - (4) EO C231.04 (Participate in a Presentation Given by a Guest Speaker from the Local Aviation Community);
    - (5) EO C231.05 (Tour a Flight Simulator); and
    - (6) EO C231.06 (Tour a Local Air Show).
  - b. Complementary training associated with PO 231 is limited to a total of 12 periods, which may be conducted during sessions or on a supported day. Squadrons are not required to use all 12 periods.

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**EO M231.01 – IDENTIFY THE FOUR FORCES THAT ACT UPON AN AIRCRAFT**

1. **Performance:** Identify the Four Forces That Act Upon an Aircraft
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify the four forces that act upon an aircraft, to include:
  - a. weight;
  - b. drag;
  - c. thrust; and
  - d. lift.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                            | Method              | Time   | Refs                             |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------------|
| TP1 | Explain that every aircraft has weight and that a glider on tow gains energy as it gains altitude.                                                                                     | Interactive Lecture | 5 min  | C3-116 (p. 22, p. 34)<br>C3-090  |
| TP2 | Explain that a glider experiences drag from the air as it returns to Earth after being released.                                                                                       | Interactive Lecture | 5 min  | C3-017 (p. 20)                   |
| TP3 | Fold and fly a simple paper glider. Introduce Newton's first law of motion, "an object in motion tends to stay in motion", with regard to aircraft.                                    | In-Class Activity   | 15 min | C3-058<br>C3-116 (p. 21)         |
| TP4 | Explain that a descending glider converts the energy of raised weight into forward thrust by acting upon the passing air.                                                              | Interactive Lecture | 10 min | C3-116 (p. 23)<br>C3-017 (p. 21) |
| TP5 | Explain that a glider's wings are designed to convert the energy of the glider's descent from downward motion to lift.                                                                 | Interactive Lecture | 5 min  | C3-017 (p. 20)                   |
| TP6 | Explain that a powered aircraft has weight and, when in flight, also experiences: <ol style="list-style-type: none"> <li>a. drag;</li> <li>b. thrust; and</li> <li>c. lift.</li> </ol> | Interactive Lecture | 10 min | C3-116 (p. 22)                   |

| TP  | Description                                                                          | Method              | Time  | Refs           |
|-----|--------------------------------------------------------------------------------------|---------------------|-------|----------------|
| TP7 | Explain that thrust and lift allow an aircraft to fly by overcoming drag and weight. | Interactive Lecture | 5 min | C3-116 (p. 21) |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 40 min |
| c. | In-Class Activity:         | 15 min |
| d. | Total:                     | 60 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 and TP2 and TP4 to TP7 to introduce the forces that act on an aircraft and give an overview of them.
- An in-class activity was chosen for TP3 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- C3-017 (ISBN 1-895569-23-0) Schmidt, N. (1998). *Fabulous Paper Gliders*. New York, NY: Sterling Publishing.
- C3-058 (ISBN 1-4027-3034-9) Schmidt, N. (2005). *Paper Creations Paper Airplanes*. New York, NY: Sterling Publishing.
- C3-090 National Aeronautics and Space Administration (NASA). (2007). *Virtual Skies*. Retrieved 22 February 2007, from <http://virtualskies.arc.nasa.gov/aeronautics/tutorial/intro.html>
- C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:**

- Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- Model of a light fixed-wing aircraft with wing struts, fixed gear and control surface detail.

9. **Learning Aids:** 8.5 x 11 inch paper.10. **Test Details:** N/A.11. **Remarks:** It is recommended that the two periods required for this EO be scheduled consecutively.

**EO M231.02 – DESCRIBE THE PRODUCTION OF LIFT BY AN AIRCRAFT WING**

1. **Performance:** Describe the Production of Lift by an Aircraft Wing
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall describe the production of lift by an aircraft wing, to include:
  - a. the airfoil camber; and
  - b. angle of attack.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                     | Method              | Time   | Refs                             |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------------|
| TP1 | Explain that air acts like a fluid insofar as it has: <ol style="list-style-type: none"> <li>a. inertia;</li> <li>b. speed; and</li> <li>c. pressure.</li> </ol>                                                                                                                                                                | Interactive Lecture | 5 min  | C3-116 (p. 21)                   |
| TP2 | Introduce Bernoulli's Principle, which states that a liquid's pressure drops when its speed increases (venturi effect).                                                                                                                                                                                                         | Interactive Lecture | 10 min | C3-116 (p. 22)                   |
| TP3 | Have the cadets explore Bernoulli's Principle by blowing: <ol style="list-style-type: none"> <li>a. over a curved sheet of paper; and</li> <li>b. between two suspended balloons.</li> </ol> <p><b>Note:</b> Explain that airfoil camber increases air speed above the wing, thereby reducing pressure; the venturi effect.</p> | In-Class Activity   | 10 min | C3-017 (p. 18)<br>C3-116 (p. 26) |
| TP4 | Introduce angle of attack. Explain that: <ol style="list-style-type: none"> <li>a. when air particles encounter the wing, air pressure increases under the wing; and</li> <li>b. the greater the angle of attack and the greater the wing's speed, the more lift will be produced, until the wing stalls.</li> </ol>            | Interactive Lecture | 5 min  | C3-116 (p. 22)                   |

| TP  | Description                                                                                                                                                           | Method            | Time   | Refs           |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|----------------|
| TP5 | Have each cadet:<br>a. create an airfoil from an index card; and<br>b. experiment with lift using a fan or hair dryer to "fly" the airfoil from a "sting" launch pad. | In-Class Activity | 25 min | C3-091 (p. 31) |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 20 min |
| c. | In-Class Activity:         | 35 min |
| d. | Total:                     | 60 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1, TP2 and TP4 to introduce the production of lift and give an overview of it.
- An in-class activity was chosen for TP3 and TP5 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- C3-017 (ISBN 1-895569-23-0) Schmidt, N. (1998). *Fabulous Paper Gliders*. New York, NY: Sterling Publishing.
- C3-058 (ISBN 1-4027-3034-9) Schmidt, N. (2005). *Paper Creations Paper Airplanes*. New York, NY: Sterling Publishing.
- C3-091 (ISBN 1-55652-477-3) Carson, M. K. (2003). *The Wright Brothers for Kids: How They Invented the Airplane*. Chicago, IL: Chicago Review Press.
- C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:**

- Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- Model of a light fixed-wing aircraft with wing struts, fixed gear and control surface detail; and
- Electric fan or hairdryer.

9. **Learning Aids:**

- Index cards;
- Tape;
- Hole punch or sharp pencil;
- Scissors;
- Plastic drinking straw;
- Bamboo skewers or large straightened paper clips;

- g. Styrofoam or corrugated cardboard;
  - h. Balloons; and
  - i. String.
10. **Test Details:** N/A.
11. **Remarks:** It is recommended that the two periods required for this EO be scheduled consecutively.

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**EO M231.03 – DESCRIBE THE TYPES OF DRAG THAT ACT UPON AN AIRCRAFT**

1. **Performance:** Describe the Types of Drag That Act Upon an Aircraft
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall describe the types of drag that act upon an aircraft, to include:
  - a. parasite drag; and
  - b. induced drag.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                  | Method              | Time   | Refs           |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------|
| TP1 | Explain that drag is an important and useful force which allows a pilot to control the aircraft's flight. Introduce the two types of drag: <ol style="list-style-type: none"> <li>a. parasite drag; and</li> <li>b. induced drag.</li> </ol> | Interactive Lecture | 5 min  | C3-116 (p. 23) |
| TP2 | Define the components of parasite drag, including: <ol style="list-style-type: none"> <li>a. form drag; and</li> <li>b. skin friction.</li> </ol>                                                                                            | Interactive Lecture | 5 min  | C3-116 (p. 23) |
| TP3 | Demonstrate form drag.                                                                                                                                                                                                                       | In-Class Activity   | 15 min | C3-092 (p. 14) |
| TP4 | Explain that induced drag results from aircraft parts which actively produce lift, such as wings and that both drag and lift increase with angle of attack.                                                                                  | Interactive Lecture | 10 min | C3-116 (p. 23) |
| TP5 | Conduct an activity to demonstrate induced drag.                                                                                                                                                                                             | In-Class Activity   | 20 min | C3-116 (p. 23) |

5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 20 min |
| c. In-Class Activity:         | 35 min |
| d. Total:                     | 60 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1, TP2 and TP4 to introduce the subject of drag and give an overview of it.
- b. An in-class activity was chosen for TP3 and TP5 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- a. C3-017 (ISBN 1-895569-23-0) Schmidt, N. (1998). *Fabulous Paper Gliders*. New York, NY: Sterling Publishing.
- b. C3-058 (ISBN 1-4027-3034-9) Schmidt, N. (2005). *Paper Creations Paper Airplanes*. New York, NY: Sterling Publishing.
- c. C3-092 (ISBN 0-7460-0978-)X Edom, H., Butterfield, M., Heddle, R. and Unwin, M. (1992). *The Usborne Book of Science Activities: Volume Two*. Tulsa OK: EDC Publishing.
- d. C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- b. Model of a light fixed-wing aircraft with wing struts, fixed gear and control surface detail.

9. **Learning Aids:**

- a. 8.5 x 11 paper;
- b. Bristol board; and
- c. Tape.

10. **Test Details:** N/A.

11. **Remarks:** It is recommended that the two periods required for this EO be scheduled consecutively.

**EO M231.04 – DESCRIBE THE AXIAL MOVEMENTS OF AN AIRCRAFT**

1. **Performance:** Describe the Axial Movements of an Aircraft
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall describe the axial movements of an aircraft, to include:
  - a. the three axes of an aircraft; and
  - b. the three corresponding axial movements.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                | Method              | Time   | Refs                             |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------------|
| TP1 | Explain that aircraft operate in a three-dimensional space. Identify the three axes of aircraft movement, to include: <ol style="list-style-type: none"> <li>a. the longitudinal axis;</li> <li>b. the lateral axis; and</li> <li>c. the vertical axis.</li> </ol>                         | Interactive Lecture | 5 min  | C3-116 (p. 30)                   |
| TP2 | Using a model aircraft, describe the three movements that aircraft make around their three axes, to include: <ol style="list-style-type: none"> <li>a. roll about the longitudinal axis;</li> <li>b. pitch about the lateral axis; and</li> <li>c. yaw about the vertical axis.</li> </ol> | Interactive Lecture | 10 min | C3-116 (p. 30)<br>C3-017 (p. 22) |
| TP3 | Discuss movement that may take place about multiple axes simultaneously in a turn.                                                                                                                                                                                                         | Group Discussion    | 5 min  | C3-116 (pp. 34-35)               |
| TP4 | Have the cadets brainstorm how aircraft flight might be controlled.<br><br><b>Note:</b> Explain that the aircraft surfaces which control these movements will be covered in the next lesson.                                                                                               | Group Discussion    | 5 min  | C3-116 (pp. 14–16)               |

5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 15 min |
| c. Group Discussion:          | 10 min |
| d. Total:                     | 30 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 and TP2 to introduce the subject of axial movement of an aircraft and give an overview of it.
- b. A group discussion was chosen for TP3 and TP4 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about axial movement of an aircraft.

7. **References:**

- a. C3-017 (ISBN 1-895569-23-0) Schmidt, N. (1998). *Fabulous Paper Gliders*. New York, NY: Sterling Publishing.
- b. C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- b. Model of a light fixed-wing aircraft with wing struts, fixed gear and control surface detail.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO M231.05 – DESCRIBE AIRCRAFT CONTROL SURFACES**

1. **Performance:** Describe Aircraft Control Surfaces
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with A-CR-CCP-263/PT-001, *From the Ground Up: Millennium Edition*, the cadet shall describe aircraft control surfaces, to include:
  - a. the location, operation and purpose of:
    - (1) empennage control surfaces;
    - (2) a main wing's control surfaces; and
    - (3) trim tabs; and
  - b. the method and purpose of balanced controls.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                    | Method              | Time  | Refs               |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------------------|
| TP1 | Identify the control surfaces of the empennage, to include: <ol style="list-style-type: none"> <li>a. the horizontal/vertical stabilizers;</li> <li>b. the rudder; and</li> <li>c. the elevator.</li> </ol>                                                    | Interactive Lecture | 5 min | C3-116 (pp. 11–16) |
| TP2 | Explain how stabilizers reduce unwanted axial movement.                                                                                                                                                                                                        | Interactive Lecture | 5 min | C3-116 (pp. 11–16) |
| TP3 | Explain that the rudder rotates the aircraft about its vertical (yaw) axis by pushing the tail to either left or right.                                                                                                                                        | Interactive Lecture | 5 min | C3-116 (pp. 11–16) |
| TP4 | Explain that the elevator rotates the aircraft about its lateral (pitch) axis by pushing the tail up or down.                                                                                                                                                  | Interactive Lecture | 5 min | C3-116 (pp. 11–16) |
| TP5 | Describe the cockpit controls that move the associated empennage control surfaces. Have the cadets enact control movements with a “pilot” calling out pedal and stick movements to the remainder of the class, who then act as pitch and yaw control surfaces. | In-Class Activity   | 5 min | C3-116 (pp. 11–16) |

| TP   | Description                                                                                                                                                                                            | Method              | Time  | Refs               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------------------|
| TP6  | Identify the wing control surfaces, to include:<br>a. ailerons; and<br>b. flaps.                                                                                                                       | Interactive Lecture | 5 min | C3-116 (pp. 11–16) |
| TP7  | Explain that the ailerons lift one wing and lower the opposite wing simultaneously as the one cockpit control is operated to control roll.                                                             | Interactive Lecture | 5 min | C3-116 (pp. 11–16) |
| TP8  | Explain that flaps are used to generate lift at the expense of airspeed and that both left and right flaps operate simultaneously.                                                                     | Interactive Lecture | 5 min | C3-116 (pp. 11–16) |
| TP9  | Explain that trim tabs were developed to hold control surfaces in position without constant control pressure from the pilot. Identify common locations of trim tabs.                                   | Interactive Lecture | 5 min | C3-116 (pp. 11–16) |
| TP10 | Explain that dynamically balanced control surfaces use air pressure to assist the pilot moving the controls by having a portion of the control surface in front of its hinge to catch the passing air. | Interactive Lecture | 5 min | C3-116 (pp. 11–16) |
| TP11 | Colour and label the control surfaces in a drawing of an aircraft.                                                                                                                                     | In-Class Activity   | 5 min | C3-116 (pp. 11–16) |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 45 min |
| c. In-Class Activity:         | 10 min |
| d. Total:                     | 60 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 to TP4 and TP6 to TP10 to introduce aircraft control surfaces and give an overview of them.
- An in-class activity was chosen for TP5 and TP11 as it is an interactive way to provoke thought and stimulate an interest among the cadets.

7. **References:** C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:**

- Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- Model of a light fixed-wing aircraft with wing struts, fixed gear and control surface detail.

9. **Learning Aids:** Coloured pencils.
10. **Test Details:** N/A.
11. **Remarks:** It is recommended that the two periods required for this EO be scheduled consecutively.

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**EO C231.01 – OPERATE AN EXPERIMENTAL WING**

1. **Performance:** Operate an Experimental Wing
2. **Conditions:**
  - a. Given:
    - (1) Materials to create airfoils for testing;
    - (2) Material and plans for constructing a wind tunnel;
    - (3) Two multi-speed fans;
    - (4) Supervision; and
    - (5) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references the cadet shall:
  - a. build an experimental wing; and
  - b. operate the experimental wing.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                               | Method              | Time   | Refs                             |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------------|
| TP1 | Identify the five parts of a wind tunnel, to include: <ol style="list-style-type: none"> <li>a. settling chamber;</li> <li>b. contraction cone;</li> <li>c. test section;</li> <li>d. diffuser; and</li> <li>e. drive section.</li> </ol> | Interactive Lecture | 5 min  | C-093                            |
| TP2 | Have the cadets, working as a team, assemble a wind tunnel.                                                                                                                                                                               | In-Class Activity   | 15 min | C-093                            |
| TP3 | Have the cadets, as a member of a group of no more than four, form airfoil shapes for testing in the wind tunnel.                                                                                                                         | In-Class Activity   | 10 min | C3-091 (p. 31)<br>C3-116 (p. 21) |
| TP4 | Have the cadets place airfoils in the wind tunnel and compare lift and drag.                                                                                                                                                              | In-Class Activity   | 25 min | C3-093                           |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 5 min  |
| c. In-Class Activity:         | 50 min |
| d. Total:                     | 60 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to introduce wind tunnels and give an overview of them.
- b. An in-class activity was chosen for TP2 to TP4 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- a. C3-091 (ISBN 1-55652-477-3) Carson, M.K. (2003). *The Wright Brothers for Kids: How They Invented the Airplane*. Chicago, IL: Chicago Review Press.
- b. C3-093 NASA. (1996). *NASA's Observatory Teacher's Guide*. Retrieved 12 February 2007, from [http://observe.arc.nasa.gov/nasa/aero/tunnel/tunnel\\_parts.html](http://observe.arc.nasa.gov/nasa/aero/tunnel/tunnel_parts.html).
- c. C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- b. Cardboard boxes;
- c. Blank OHP slides;
- d. Duct tape;
- e. Two multi-speed fans; and
- f. Box cutter.

9. **Learning Aids:**

- a. File folders (letter-size);
- b. Tape;
- c. Stapler; and
- d. Locally available materials for constructing experimental wings.

10. **Test Details:** N/A.

11. **Remarks:** It is recommended that the two periods required for this EO be scheduled consecutively.

**EO C231.02 – FLY A PAPER COLDITZ GLIDER**

1. **Performance:** Fly a Paper Colditz Glider
2. **Conditions:**
  - a. Given:
    - (1) Directions and materials required to construct a paper Colditz glider;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental:
    - (1) Suitable classroom facilities or training area large enough to accommodate the entire group; and
    - (2) Suitable area for flying paper gliders.
3. **Standard:** In accordance with specified references, the cadet shall:
  - a. construct a paper Colditz glider; and
  - b. fly the paper Colditz glider.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                 | Method              | Time   | Refs                                     |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------------------------------|
| TP1 | Explain the history and design of a paper Colditz glider, to include: <ol style="list-style-type: none"> <li>a. history;</li> <li>b. construction;</li> <li>c. trimming for flight; and</li> <li>d. flying tips.</li> </ol> | Interactive Lecture | 15 min | C3-094<br>C3-058 (pp. 5–9)               |
| TP2 | Supervise the cadets' construction of a paper model of the Colditz glider.                                                                                                                                                  | In-Class Activity   | 20 min | C3-017 (pp. 52–56)<br>C3-058 (pp. 52–55) |
| TP3 | Supervise the cadets flying their paper Colditz gliders.                                                                                                                                                                    | In-Class Activity   | 15 min | C3-058 (pp. 9–11)                        |
| TP4 | Discuss flying paper Colditz gliders.                                                                                                                                                                                       | Group Discussion    | 5 min  | C3-058 (pp. 9–11)                        |

5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 15 min |
| c. In-Class Activity:         | 35 min |
| d. Group Discussion:          | 5 min  |
| e. Total:                     | 60 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 as it introduces paper gliders, orients the cadets to the topic and generates interest.
- b. An in-class activity was chosen for TP2 and TP3 as it is an interactive way to provoke thought and stimulate interest among cadets and confirm the cadets' comprehension of the material.
- c. A group discussion was chosen for TP4 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings about paper gliders.

7. **References:**

- a. C3-017 (ISBN 1-895569-23-0) Schmidt, N. (1998). *Fabulous Paper Gliders*. New York, NY: Sterling Publishing.
- b. C3-058 (ISBN 1-4027-3034-9) Schmidt, N. (2005). *Paper Creations Paper Airplanes*. New York, NY: Sterling Publishing.
- c. C3-094 Colditz Museum. (2005). *Colditz Glider*. Retrieved 23 February 2007, from <http://www.colditz-4c.com/glider.htm>.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- b. Completed paper Colditz glider for demonstration purposes;
- c. Directions to construct a paper glider located at A-CR-CCP-802/PF-001, Annexes A, B and C; and
- d. Materials required to construct a paper glider.

9. **Learning Aids:**

- a. Directions to construct a paper Colditz glider located at A-CR-CCP-802/PF-001, Annexes A, B and C;
- b. Card stock (4 x 5 inch);
- c. Glue stick;
- d. Scissors;
- e. Ruler;
- f. Pencil; and
- g. Coloured markers.

10. **Test Details:** N/A.

11. **Remarks:**

- a. It is recommended that the two periods required for this EO be scheduled consecutively.
- b. If the weather is not suitable to fly the paper gliders outdoors, flights may take place indoors.

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**EO C231.03 – TOUR A FLIGHT SCHOOL**

1. **Performance:** Tour a Flight School
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine the conditions suitable for this training.
3. **Standard:** The cadet shall tour a flight school to identify aspects of flight training.
4. **Teaching Points:** The tour guide is asked to explain the:
  - a. length of time for the Ministry of Transport ground school requirement;
  - b. training schedule at the flight school;
  - c. topics to be covered during training;
  - d. availability of training aircraft and instructors;
  - e. certifications that are offered;
  - f. costs associated with training; and
  - g. control surfaces and parts of an airplane using a static example.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Field Trip :               | 80 min |
| c. Total:                     | 90 min |
6. **Substantiation:** A field trip approach was chosen for this lesson to reinforce cadets' knowledge of material previously taught in EO M231.01 (Identify the Four Forces That Act Upon an Aircraft), EO M231.02 (Describe the Production of Lift by an Aircraft Wing), EO M231.03 (Describe the Types of Drag That Act Upon an Aircraft), EO M231.04 (Describe the Axial Movements of an Aircraft) and EO M231.05 (Describe Aircraft Control Surfaces) through participation in a tour.
7. **References:** N/A.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Cadet squadron personnel are to determine whether a guide will escort the group or if an instructor from the squadron will be responsible for conducting the tour. If an instructor from the squadron will conduct the tour, all teaching points are to be researched in advance.

- b. This field trip can be completed on a supported day or during a complementary session.
- c. There is no instructional guide for this lesson.

# **EO C231.04 – PARTICIPATE IN A PRESENTATION GIVEN BY A GUEST SPEAKER FROM THE LOCAL AVIATION COMMUNITY**

1. **Performance:** Participate in a Presentation Given by a Guest Speaker From the Local Aviation Community
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough for the entire group.
3. **Standard:** The cadet will participate in a presentation, given by a guest speaker from the local aviation community, to gain exposure to an aspect of aviation.
4. **Teaching Points:** The guest speaker is asked to:
  - a. describe the service or facility of which they are a member;
  - b. describe their duties;
  - c. explain the role of their service or facility in the community; and
  - d. facilitate a question and answer period.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Interactive Lecture:       | 50 min |
| c. Total:                     | 60 min |
6. **Substantiation:** An interactive lecture method was chosen for this lesson to review, clarify, emphasize and summarize the teaching points.
7. **References:** N/A.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Required training aids should be determined by contacting the speaker prior to the presentation.
  - b. There is no instructional guide for this EO.

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**EO C231.05 – TOUR A FLIGHT SIMULATOR**

1. **Performance:** Tour a Flight Simulator
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine the conditions suitable for this training.
3. **Standard:** The cadet shall tour a flight simulator to identify aspects of flight training.
4. **Teaching Points:** The tour guide is asked to explain the:
  - a. procedure for booking the flight simulator;
  - b. procedure for operating the flight simulator;
  - c. availability of the flight simulator;
  - d. conditions which can be simulated;
  - e. availability of instructors; and
  - f. costs associated with using the flight simulator.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Field Trip :               | 80 min |
| c. Total:                     | 90 min |
6. **Substantiation:** A field trip approach was chosen for this lesson to reinforce cadets' knowledge of material previously taught in EO M231.01 (Identify the Four Forces That Act Upon an Aircraft), EO M231.02 (Describe the Production of Lift by an Aircraft Wing), EO M231.03 (Describe the Types of Drag That Act Upon an Aircraft), EO M231.04 (Describe the Axial Movements of an Aircraft) and EO M231.05 (Describe Aircraft Control Surfaces) through participation in a tour.
7. **References:** N/A.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Cadet squadron personnel are to determine whether a guide will escort the group or if an instructor from the squadron will be responsible for conducting the tour. If an instructor from the squadron will conduct the tour, all teaching points are to be researched in advance.

- b. This field trip can be completed on a supported day or during a complementary session.
- c. There is no instructional guide for this lesson.

**EO C231.06 – TOUR A LOCAL AIR SHOW**

1. **Performance:** Tour a Local Air Show
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine the conditions suitable for this training.
3. **Standard:** The cadet shall tour a local air show to identify aspects of aircraft and aircraft components that have been described in the classroom.
4. **Teaching Points:** The tour guide is asked to identify and explain:
  - a. types of aircraft on display at the show;
  - b. general aircraft components;
  - c. aircraft parts that contribute to the development of lift;
  - d. aircraft parts that contribute to drag;
  - e. aircraft control surfaces; and
  - f. types of engines used in aircraft on display at the show.
5. **Time:**

|                               |         |
|-------------------------------|---------|
| a. Introduction / Conclusion: | 10 min  |
| b. Field Trip :               | 170 min |
| c. Total:                     | 180 min |
6. **Substantiation:** A field trip approach was chosen for this lesson to reinforce cadets' knowledge of material previously taught in EO M231.01 (Identify the Four Forces That Act Upon an Aircraft), EO M231.02 (Describe the Production of Lift by an Aircraft Wing), EO M231.03 (Describe the Types of Drag That Act Upon an Aircraft), EO M231.04 (Describe the Axial Movements of an Aircraft) and EO M231.05 (Describe Aircraft Control Surfaces) through participation in a tour.
7. **References:** N/A.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Cadet squadron personnel are to determine whether a guide will escort the group or if an instructor from the squadron will be responsible for conducting the tour. If an instructor from the squadron will conduct the tour, all teaching points are to be researched in advance.

- b. This field trip can be completed on a supported day or during a complementary session.
- c. There is no instructional guide for this lesson.

**SECTION 13****PO 232 – IDENTIFY CHARACTERISTICS OF PISTON-POWERED AIRCRAFT**

1. **Performance:** Identify Characteristics of Piston-Powered Aircraft
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facility to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet will identify the characteristics of piston-powered aircraft, to include:
  - a. types of engines;
  - b. the components of an internal combustion engine;
  - c. the four-stroke cycle; and
  - d. the functions of oil.
4. **Remarks:** N/A.
5. **Complementary Material:**
  - a. Complementary material associated with PO 232 is designed to enhance the cadet's knowledge about how other aircraft are powered:
    - (1) EO C232.01 (Identify the Characteristics of Gas Turbine Engines);
    - (2) EO C232.02 (Identify the Characteristics of Rocket Engines); and
    - (3) EO C232.03 (Identify the Characteristics of Helicopter Engines).
  - b. Complementary training associated with PO 232 is limited to a total of six periods, which may be conducted during sessions or on a supported day. Squadrons are not required to use all six periods.

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**EO M232.01 – IDENTIFY TYPES OF AIRCRAFT ENGINES**

1. **Performance:** Identify Types of Aircraft Engines
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify types of aircraft engines, to include:
  - a. rocket engines;
  - b. gas turbine engines; and
  - c. piston-powered engines.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                        | Method              | Time   | Refs                                                   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------------------------------------|
| TP1 | Explain that a powered aircraft needs a means of propulsion to overcome drag and allow the wings to generate lift. Identify common engine types used for propulsion, to include: <ol style="list-style-type: none"> <li>a. rocket engines;</li> <li>b. gas turbine jet engines; and</li> <li>c. piston-powered engines.</li> </ol> | Interactive Lecture | 10 min | C3-116 (p. 51)<br>C3-084<br>C3-086<br>C3-087<br>C3-088 |
| TP2 | Explain combustion in rocket, gas turbine and piston-powered engines.                                                                                                                                                                                                                                                              | Interactive Lecture | 5 min  | C3-087                                                 |
| TP3 | Explain the oxidization process for the different types of engines.                                                                                                                                                                                                                                                                | Interactive Lecture | 5 min  | C3-084<br>C3-088                                       |
| TP4 | Identify aircraft and associated engine types.                                                                                                                                                                                                                                                                                     | Interactive Lecture | 5 min  | C3-116                                                 |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 25 min
  - c. Total: 30 min

6. **Substantiation:** An interactive lecture was chosen for this lesson to introduce types of aircraft engines and give an overview of them.
7. **References:**
  - a. A3-031 Canadian Forces. *Aircraft*. (2006). Retrieved 20 November 2006, from [http://www.airforce.gc.ca/equip/equip1\\_e.asp](http://www.airforce.gc.ca/equip/equip1_e.asp).
  - b. C3-084 NASA Glenn Research Center. *Engines 101*. Retrieved 21 February 2007, from <http://www.ueet.nasa.gov/Engines101.html#Aeronautics>.
  - c. C3-086 NASA Glenn Research Center. *Engines 101*. Retrieved 21 February 2007, from <http://www.grc.nasa.gov/WWW/K-12/airplane/icengine.html>.
  - d. C3-087 NASA Glenn Research Center. *Propulsion Index*. Retrieved 21 February 2007, from <http://www.grc.nasa.gov/WWW/K-12/airplane/shortp.html>.
  - e. C3-088 NASA *Welcome to the Beginner's Guide to Rockets*. Retrieved 21 February 2007, from <http://exploration.grc.nasa.gov/education/rocket/bgmr.html>.
  - f. C3-116 A-CR-CCP-263/PT-001/(ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.
  - g. C3-120 Pratt & Whitney Canada. (2006). *Imagine the Power*. Retrieved 18 March 2007, from [http://www.pwc.ca/en/3\\_0/3\\_0\\_3/3\\_0\\_3\\_3\\_1.asp](http://www.pwc.ca/en/3_0/3_0_3/3_0_3_3_1.asp).
  - h. C3-121 NASA. (2007). *Missions: Space Shuttle Main Engines*. Retrieved 18 March 2007, from [http://www.nasa.gov/returntoflight/system/system\\_SSME.html](http://www.nasa.gov/returntoflight/system/system_SSME.html).
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** If a computer and projector are available, software to demonstrate engine operation can be found at the Websites listed under reference para 7c.

## EO M232.02 – IDENTIFY THE COMPONENTS OF PISTON-POWERED INTERNAL COMBUSTION ENGINES

1. **Performance:** Identify the Components of Piston-Powered Internal Combustion Engines
2. **Conditions:**
  - a. Given:
    - (1) List of questions and answers at Annex E;
    - (2) Coin;
    - (3) One large die;
    - (4) Coloured poster board;
    - (5) Masking tape;
    - (6) Supervision; and
    - (7) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify the components of piston-powered internal combustion engines, to include:
  - a. stationary engine parts;
  - b. moving engine parts;
  - c. timing system components;
  - d. fuel/air delivery components; and
  - e. electrical spark distribution system components.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                | Method              | Time   | Refs                            |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|---------------------------------|
| TP1 | Identify and explain the operation of the major components of a piston-powered four-stroke internal combustion engine, to include: <ol style="list-style-type: none"> <li>a. the cylinder;</li> <li>b. the piston;</li> <li>c. the connecting rod;</li> <li>d. the crankshaft;</li> <li>e. the camshaft;</li> <li>f. the distributor;</li> <li>g. the carburetor; and</li> <li>h. the oil sump.</li> </ol> | Interactive Lecture | 25 min | C3-116<br>(pp. 41–71)<br>C3-086 |

| TP  | Description                                                                                                                                                                                                                                                              | Method              | Time   | Refs           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------|
| TP2 | Explain that some early aircraft engines used rotary engines in which the cylinders themselves rotated around the central crankshaft. These were different than the later radial engines in which the stationary cylinders were arranged around the rotating crankshaft. | Interactive Lecture | 5 min  | C3-087         |
| TP3 | Describe other piston-powered engine arrangements that have been used in aircraft, to include:<br><br>a. engines with in-line cylinders; and<br>b. engines with horizontally-opposed cylinders.                                                                          | Interactive Lecture | 10 min | C3-116         |
| TP4 | Play a game of piston-powered baseball.                                                                                                                                                                                                                                  | In-Class Activity   | 15 min | C3-003 (p. 70) |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 40 min |
| c. | In-Class Activity:         | 15 min |
| d. | Total:                     | 60 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 to TP3 to introduce the components of internal combustion engines and give an overview of them.
- An in-class activity was chosen for TP4 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- C3-003 (ISBN 0-943210-44-5) Pike, B. and Busse, C. (1995). *101 More Games for Trainers*. Minneapolis, MN: Lakewood Books.
- C3-086 NASA Glenn Research Center. *Engines 101*. Retrieved 21 February 2007, from <http://www.grc.nasa.gov/WWW/K-12/airplane/icengine.html>.
- C3-087 NASA Glenn Research Center. *Propulsion Index*. Retrieved 21 February 2007, from <http://www.grc.nasa.gov/WWW/K-12/airplane/shortp.html>.
- C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. It is recommended that the two periods required for this EO be scheduled consecutively.
  - b. If a computer and projector are available, software to demonstrate engine operation can be found at the Websites listed under reference para 7c.

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**EO M232.03 – EXPLAIN THE CYCLES OF A FOUR-STROKE PISTON-POWERED ENGINE**

1. **Performance:** Explain the Cycles of a Four-stroke Piston-powered Engine
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall explain the cycles of a four-stroke piston-powered engine, to include:
  - a. the purpose of each stroke;
  - b. the intake/exhaust valve operations; and
  - c. the ignition spark timing methods.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Method              | Time   | Refs                     |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------|
| TP1 | Explain the purposes of the strokes of a four-stroke piston, to include: <ol style="list-style-type: none"> <li>a. the intake (induction) stroke is responsible for drawing fuel and air into the combustion chamber;</li> <li>b. the compression stroke forces the fuel and air into the combustion chamber;</li> <li>c. the power (combustion) stroke transmits the energy of the exploding fuel to the crankshaft; and</li> <li>d. the exhaust stroke cleans the cylinder of exhaust fumes and prepares it for the next intake stroke.</li> </ol> | Interactive Lecture | 15 min | C3-116 (p. 43)<br>C3-086 |
| TP2 | Identify and explain the operation of: <ol style="list-style-type: none"> <li>a. valves; and</li> <li>b. cam shafts.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                      | Interactive Lecture | 5 min  | C3-116 (p. 43)<br>C3-086 |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Method              | Time   | Refs                     |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------|
| TP3 | <p>Explain the timing of electrical ignition spark distribution, to include:</p> <ul style="list-style-type: none"> <li>a. the time required for the complete combustion;</li> <li>b. a unique time for each cylinder's detonation; and</li> <li>c. the mechanical arrangements providing timing.</li> </ul>                                                                                                                                                                                                              | Interactive Lecture | 10 min | C3-116 (p. 43)<br>C3-086 |
| TP4 | <p>Explain that all the engine operations must proceed precisely in order and list those operations in order, with emphasis on the simultaneous events, to include:</p> <ul style="list-style-type: none"> <li>a. fuel and air mixture;</li> <li>b. intake stroke;</li> <li>c. intake valve operation;</li> <li>d. compression stroke;</li> <li>e. electrical points operation;</li> <li>f. power stroke;</li> <li>g. exhaust stroke;</li> <li>h. exhaust valve operation; and</li> <li>i. camshaft operation.</li> </ul> | Interactive Lecture | 10 min | C3-116 (p. 43)<br>C3-086 |
| TP5 | Enact the performance of the four-stroke engine operation in teams of six.                                                                                                                                                                                                                                                                                                                                                                                                                                                | In-Class Activity   | 15 min | C3-086                   |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 40 min |
| c. In-Class Activity:         | 15 min |
| d. Total:                     | 60 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to TP4 to introduce the cycles of a four-stroke piston-powered engine and give an overview of them.
- b. An in-class activity was chosen for TP5 as it is an interactive way to provoke thought and stimulate interest among the cadets.

7. **References:**

- a. C3-086 NASA Glenn Research Center. *Engines 101*. Retrieved 21 February 2007, from <http://www.grc.nasa.gov/WWW/K-12/airplane/icengine.html>.
- b. C3-087 NASA Glenn Research Center. *Propulsion Index*. Retrieved 21 February 2007, from <http://www.grc.nasa.gov/WWW/K-12/airplane/shortp.html>.
- c. C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:**

- a. It is recommended that the two periods required for this EO be scheduled consecutively.
- b. If a computer and projector are available, software to demonstrate engine operation can be found at the Websites listed under reference para 7.b.

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**EO M232.04 – RECOGNIZE THE FUNCTIONS OF OIL IN A FOUR-STROKE PISTON-POWERED ENGINE**

1. **Performance:** Recognize the Functions of Oil in a Four-stroke Piston-powered Engine
2. **Conditions:**
  - a. Given:
    - (1) Hand cream;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with A-CR-CCP-263/PT-001, the cadet shall recognize the functions of oil in a four-stroke piston-powered engine, to include:
  - a. lubricating;
  - b. sealing;
  - c. cooling; and
  - d. flushing.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                 | Method              | Time  | Refs               |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------------------|
| TP1 | Explain how oil lubricates the engine and aspects of lubrication, to include: <ol style="list-style-type: none"> <li>a. grades and viscosities of oil; and</li> <li>b. thinning of oil as temperature increases.</li> </ol> | Interactive Lecture | 5 min | C3-116 (pp. 57–59) |
| TP2 | Allow the cadets to compare the friction and heat.                                                                                                                                                                          | In-Class Activity   | 5 min | C3-116 (pp. 57–59) |
| TP3 | Explain that oil seals the combustion chamber to prevent the expanding gases from leaking out during the power stroke.                                                                                                      | Interactive Lecture | 5 min | C3-116 (pp. 57–59) |
| TP4 | Explain how oil cools hot spots in the engine.                                                                                                                                                                              | Interactive Lecture | 5 min | C3-116 (pp. 57–59) |
| TP5 | Explain that oil removes and holds particles harmful to the engine.                                                                                                                                                         | Interactive Lecture | 5 min | C3-116 (pp. 57–59) |

5. **Time:**

|    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 20 min |
| c. | In-Class Activity:         | 5 min  |
| d. | Total:                     | 30 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 and TP3 to TP5 to introduce the functions of oil in a four-stroke piston-powered engine and to give an overview of them.
- b. An in-class activity was chosen for TP2 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:** C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- b. Hand cream.

9. **Learning Aids:** Hand cream.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO C232.01 – IDENTIFY THE CHARACTERISTICS OF GAS TURBINE ENGINES**

1. **Performance:** Identify the Characteristics of Gas Turbine Engines
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify the characteristics of gas turbine engines, to include:
  - a. describing general gas turbine theory; and
  - b. identifying various aspects of gas turbines.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Method              | Time   | Refs                             |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------------|
| TP1 | Explain that a jet engine is a reactive engine that propels by ejecting material as per Newton's third law of motion.                                                                                                                                                                                                                                                                                                                                                                                                | Interactive Lecture | 5 min  | C3-116 (p. 85)                   |
| TP2 | Have the cadets explore Newton's third law of motion by making and operating a Pop Can Hero Engine.                                                                                                                                                                                                                                                                                                                                                                                                                  | In-Class Activity   | 15 min | C3-016 (p. 29)<br>C3-057 (p. 11) |
| TP3 | Describe the history of reaction engine development, to include: <ol style="list-style-type: none"> <li>a. Hero's aeolipile toy;</li> <li>b. Chinese gunpowder rockets;</li> <li>c. Leonardo Da Vinci's chimney jack;</li> <li>d. Branca's stamping mill;</li> <li>e. Stolze's first gas turbine engine;</li> <li>f. Whittle's gas turbine for jet propulsion;</li> <li>g. the flight of the Heinkel HE-178;</li> <li>h. Whittle's Gloster Meteor turbojet; and</li> <li>i. Anslem's axial-flow turbojet.</li> </ol> | Interactive Lecture | 10 min | C3-088                           |
| TP4 | Explain the advantages of using a turbine, to include: <ol style="list-style-type: none"> <li>a. compression requirement;</li> <li>b. running at static conditions; and</li> <li>c. power to operate ancillary systems.</li> </ol>                                                                                                                                                                                                                                                                                   | Interactive Lecture | 5 min  | C3-084<br>C3-087                 |

| TP  | Description                                                                                                                                                                         | Method              | Time   | Refs           |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------|
| TP5 | Identify and describe the parts of a gas turbine turbofan engine, to include:<br><br>a. fan;<br>b. compressor;<br>c. combustor;<br>d. turbine;<br>e. nozzle; and<br>f. afterburner. | Interactive Lecture | 5 min  | C3-086         |
| TP6 | Conduct a crossword game based on jet power.                                                                                                                                        | In-Class Activity   | 15 min | C0-003 (p. 70) |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 25 min |
| c. In-Class Activity:         | 30 min |
| d. Total:                     | 60 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 and TP3 to TP5 to introduce the characteristics of gas turbine engines and give an overview of them.
- An in-class activity was chosen for TP2 and TP6 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- C0-003 (ISBN 0-943210-44-5) Pike, B. and Busse, C. (1995). *101 More Games for Trainers*. Minneapolis, MN: Lakewood Books.
- C3-016 EG-2003-01-108-HQ NASA. (2003). *Rockets: A Teacher's Guide With Activities in Science, Mathematics, and Technology*. Washington, DC: NASA.
- C3-057 ISBN-10 1-59647-055-0 Sobey, E. (2006). *Rocket-powered Science*. Tucson, AZ: Good Year Books.
- C3-084 NASA Glenn Research Center. *Engines 101 – Ultra-Efficient Engine Technology (UEET)*. Retrieved February 21, 2007, from <http://www.ueet.nasa.gov/Engines101.html#Aeronautics>.
- C3-086 NASA Glenn Research Center. *Engines 101*. Retrieved 21 February 2007, from <http://www.grc.nasa.gov/WWW/K-12/airplane/icengine.html>.
- C3-087 NASA Glenn Research Center. *Propulsion Index*. Retrieved 21 February 2007, from <http://www.grc.nasa.gov/WWW/K-12/airplane/shortp.html>.
- C3-088 NASA Glenn Research Center. *Beginner's Guide to Rockets*. Retrieved 21 February 2007, from <http://exploration.grc.nasa.gov/education/rocket/bgmr.html>
- C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I.L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Limited.

8. **Training Aids:**
  - a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
  - b. Coloured marking pens.
9. **Learning Aids:**
  - a. Straight pin;
  - b. Empty pop can;
  - c. Nail;
  - d. Scissors; and
  - e. Pencils with erasers.
10. **Test Details:** N/A.
11. **Remarks:** It is recommended that the two periods required for this EO be scheduled consecutively.

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**EO C232.02 – IDENTIFY THE CHARACTERISTICS OF ROCKET ENGINES**

1. **Performance:** Identify the Characteristics of Rocket Engines
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify the characteristics of rocket engines, to include:
  - a. general rocket theory; and
  - b. liquid and solid fuel oxidization methods.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                              | Method              | Time   | Refs                                   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------------------|
| TP1 | Explain aspects of reactive thrust in various methods of propulsion, to include: <ol style="list-style-type: none"> <li>a. jet systems;</li> <li>b. propeller systems;</li> <li>c. wheeled vehicles; and</li> <li>d. walking.</li> </ol> | Interactive Lecture | 5 min  | C3-087<br>C3-016 (pp. 13–17)<br>C3-037 |
| TP2 | Have the cadets explore Newton's third law of motion by staging and operating balloon rockets on a string, followed by a discussion.                                                                                                     | In-Class Activity   | 20 min | C3-016 (pp. 63–64)<br>C3-057 (pp. 42)  |
| TP3 | Explain how rocket systems operate in space because they are self-contained and require no atmospheric oxygen.                                                                                                                           | Interactive Lecture | 5 min  | C3-016 (pp. 18–24)                     |
| TP4 | Explain the differences between solid-fuel and liquid-fuel rocket engine systems, to include: <ol style="list-style-type: none"> <li>a. construction;</li> <li>b. vehicle applications; and</li> <li>c. fuels and oxidation.</li> </ol>  | Interactive Lecture | 10 min | C3-016 (pp. 5–12)                      |

| TP  | Description                                                                                            | Method              | Time   | Refs                                 |
|-----|--------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------------------|
| TP5 | Discuss launch vehicles, to include:<br>a. American;<br>b. Russian;<br>c. European; and<br>d. Chinese. | Interactive Lecture | 15 min | C3-100<br>C3-112<br>C3-113<br>C3-114 |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 35 min |
| c. | In-Class Activity:         | 20 min |
| d. | Total:                     | 60 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1, TP3, TP4 and TP5 to introduce characteristics of rocket engines and give an overview of them.
- An in-class activity was chosen for TP2 as it is an interactive way to provoke thought and stimulate an interest among cadets.

7. **References:**

- C3-016 (ISBN EG-2003-01-108-HQ) NASA. (2003). *Rockets: A Teacher's Guide With Activities in Science, Mathematics, and Technology*. Washington, DC: NASA.
- C3-037 *Space Exploration*. (2006). Retrieved 25 May 2006, from <http://www.space.gc.ca/asc/eng/exploration/exploration.asp>.
- C3-057 (ISBN 10-1-59647-055-0) Sobey, E. (2006). *Rocket-powered Science*. Tucson, AZ. Good Year Books.
- C3-087 NASA Glenn Research Center. *Propulsion Index*. Retrieved 21 February 2007, from <http://www.grc.nasa.gov/WWW/K-12/airplane/shortp.html>.
- C3-088 NASA Glenn Research Center. *Beginner's Guide to Rockets*. Retrieved 21 February 2007, from <http://exploration.grc.nasa.gov/education/rocket/bgmr.html>.
- C3-100 China In Space. *The Long March Space Rockets*. Retrieved 26 February 2007, from <http://www.spacetoday.org/China/ChinaRockets.html>.
- C3-112 Federal Space Agency. *Rocket1Show*. Retrieved 26 February 2007, from <http://www.roscosmos.ru/RocketsMain.asp>.
- C3-113 European Space Agency. *ESA Launch Vehicles*. Retrieved 26 February 2007, from <http://www.esa.int/esaCP/index.html>.
- C3-114 NASA. *Countdown! NASA Launch Vehicles and Facilities*. Retrieved 27 February 2007, from <http://www-pao.ksc.nasa.gov/kscpao/nasafact/count1.htm#nasa>.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- b. Slides of American, Russian, European and Chinese launch vehicles.

9. **Learning Aids:**

- a. Balloons;
- b. String;
- c. Straw;
- d. Tape; and
- e. Paper or Styrofoam cup.

10. **Test Details:** N/A.

11. **Remarks:**

- a. It is recommended that the two periods required for this EO be scheduled consecutively.
- b. Website references should be made available for cadets to explore on their own time.

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**EO C232.03 – IDENTIFY THE CHARACTERISTICS OF HELICOPTER ENGINES**

1. **Performance:** Identify the Characteristics of Helicopter Engines
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify the characteristics of helicopter engines, to include:
  - a. technical development of early helicopter engines;
  - b. challenges of rotary-wing flight; and
  - c. categories of engines in CF helicopters.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                      | Method              | Time   | Refs             |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------|
| TP1 | Explain technological developments that made helicopters viable.                                                                                                                                                                                                                 | Interactive Lecture | 5 min  | C3-061           |
| TP2 | Have the cadets make and fly a paper helicopter.                                                                                                                                                                                                                                 | In-Class Activity   | 20 min | C3-056           |
| TP3 | Explain why helicopters have a top speed and why helicopter rotors have constant speed.                                                                                                                                                                                          | Interactive Lecture | 10 min | C3-055           |
| TP4 | Explain how lift of the main rotor is changed during flight.                                                                                                                                                                                                                     | Interactive Lecture | 5 min  | C3-061<br>C3-054 |
| TP5 | Explain that most helicopters use turboshaft engines.                                                                                                                                                                                                                            | Interactive Lecture | 5 min  | C3-061           |
| TP6 | Have the cadets identify the following CF helicopters and discuss each engine of: <ol style="list-style-type: none"> <li>a. CH-149 Cormorant;</li> <li>b. CH-148 Cyclone;</li> <li>c. CH-146 Griffon;</li> <li>d. CH-139 Jet Ranger; and</li> <li>e. CH-124 Sea King.</li> </ol> | Interactive Lecture | 10 min | C3-050           |

5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 35 min |
| c. In-Class Activity:         | 20 min |
| d. Total:                     | 60 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 and TP3 to TP6 to introduce characteristics of helicopter engines and give an overview of them.
- b. An in-class activity was chosen for TP2 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- a. C3-050 Department of National Defence. (2006). *Canada's Air Force, Aircraft Main Page*. Retrieved 11 October 2006, from [http://www.airforce.forces.gc.ca/equip/equip1\\_e.asp](http://www.airforce.forces.gc.ca/equip/equip1_e.asp).
- b. C3-054 Frost, M. (2004). *Force and Movement: Making a Helicopter*. Retrieved 11 October 2006, from [http://www.teacherresourcesgalore.com/physics\\_files/helicopter.doc](http://www.teacherresourcesgalore.com/physics_files/helicopter.doc).
- c. C3-055 University of Sydney. *Helicopters*. (2006). Retrieved 12 October 2006, from <http://alex.edfac.usyd.edu.au/blp/websites/Machan/heli.htm>.
- d. C3-056 US Centennial of Flight Commission. *Helicopters*. (2003). Retrieved 12 October 2006, from <http://www.centennialofflight.gov/essay/Dictionary/helicopter/DI27.htm>.
- e. C3-061 Leishman, J.G. (2000). *A History of Helicopter Flight*. Retrieved 1 November 2006, from <http://www.glue.umd.edu/~leishman/Aero/history/html>.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- b. Completed paper helicopter for demonstration purposes;
- c. Model helicopter with tail-rotor (e.g. Jet Ranger); and
- d. Helium-filled balloon.

9. **Learning Aids:**

- a. Directions to construct and fold a paper helicopter (A-CR-CCP-802/PF-001, Annex D); and
- b. Materials required to construct a paper helicopter.

10. **Test Details:** N/A.

11. **Remarks:** It is recommended that the two periods required for this EO be scheduled consecutively.

**SECTION 14****PO 240 – PARTICIPATE IN AEROSPACE ACTIVITIES**

1. **Performance:** Participate in Aerospace Activities
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Any conditions.
3. **Standard:** In accordance with specified references, the cadet will participate in aerospace activities, to include:
  - a. exploring current advancements in aerospace technology;
  - b. inventing a space technology item; and
  - c. participating in a space survival scenario.
4. **Remarks:** N/A.
5. **Complementary Material:**
  - a. Complementary material associated with PO 240 is designed to enhance the cadet's knowledge of aerospace technology:
    - (1) EO C240.01 (Participate in a Non-Verbal Communication Activity);
    - (2) EO C240.02 (Invent a Communication System for Space);
    - (3) EO C240.03 (Identify Parts of a Rocket);
    - (4) EO C240.04 (Navigate With a Global Positioning System [GPS]);
    - (5) EO C240.05 (Simulate Survival in Space); and
    - (6) EO C240.06 (Determine Direction Using Constellations on a Field Exercise).
  - b. Complementary training associated with PO 240 is limited to a total of ten periods, which may be conducted during sessions or on a supported day. Squadrons are not required to use all ten periods.

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**EO M240.01 – EXPLORE CURRENT ADVANCEMENTS IN AEROSPACE TECHNOLOGY**

1. **Performance:** Explore Current Advancements in Aerospace Technology
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities large enough to accommodate the entire group.
3. **Standard:** In accordance with *Space on Earth: How Technology Transfer Benefits Humanity*, and in groups of no more than four, the cadet shall explore current advancements in aerospace technology.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Method            | Time   | Refs   |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|--------|
| TP1 | <p>Conduct an activity to explore current advancements in aerospace technology. Cadets may come up with the following:</p> <ol style="list-style-type: none"> <li>a. satellite radio;</li> <li>b. video image stabilization and registration;</li> <li>c. satellite TV;</li> <li>d. DeBakey blood pump;</li> <li>e. global positioning system;</li> <li>f. temper foam;</li> <li>g. advanced communications technology;</li> <li>h. fire-resistant aircraft seats;</li> <li>i. excimer angioplasty system; and</li> <li>j. liquid-cooled garments, etc.</li> </ol> <p><b>Note:</b> Refer to <a href="http://www.space.com">http://www.space.com</a> for up-to-date advancements in space technology.</p> | In-Class Activity | 25 min | C3-110 |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. In-Class Activity: 25 min
  - c. Total: 30 min

6. **Substantiation:** An in-class activity was chosen for this lesson as it is an interactive way to present advancements in aerospace technology and stimulate interest among cadets.
7. **References:** C3-110 Space.com. (2006). *Space on Earth: How Technology Transfer Benefits Humanity*. Retrieved 27 February 2007, from [http://www.space.com/business/technology/tech\\_hallofame\\_030101-1.html](http://www.space.com/business/technology/tech_hallofame_030101-1.html).
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** Information cards.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

**EO M240.02 – INVENT A SPACE TECHNOLOGY ITEM**

1. **Performance:** Invent a Space Technology Item
2. **Conditions:**
  - a. Given:
    - (1) Consumable items for construction;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with Goodman, P., *Arty Facts: Space and Art Activities*, Crabtree Publishing, and in groups of no more than four, the cadet shall invent a space technology item, to include:
  - a. brainstorming ideas about the invention;
  - b. designing the idea on paper; and
  - c. constructing the item out of consumable items.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                         | Method              | Time   | Refs           |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------|
| TP1 | Explain that there are many challenges astronauts encounter while in space, such as: <ol style="list-style-type: none"> <li>a. transportation to and from space; and</li> <li>b. the living environment.</li> </ol> | Interactive Lecture | 5 min  | C3-040 (p. 36) |
| TP2 | Conduct an activity where cadets invent and construct a space technology item.                                                                                                                                      | In-Class Activity   | 35 min |                |
| TP3 | Conduct a group discussion where cadets share their space technology item with the entire group.                                                                                                                    | Group Discussion    | 15 min |                |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 5 min
  - c. In-Class Activity: 35 min
  - d. Group Discussion: 15 min
  - e. Total: 60 min

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to orient the cadets to space technology and to give an overview of it.
- b. An in-class activity was chosen for TP2 as it is an interactive way to provoke thought and stimulate interest among cadets.
- c. A group discussion was chosen for TP3 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings about space technology.

7. **References:** C3-040 (ISBN 0-7787-1140-4) Goodman, P. (2002). *Arty Facts: Space and Art Activities*. St. Catharines, ON. Crabtree Publishing.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:** Consumable items for construction.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO M240.03 – PARTICIPATE IN A SPACE SURVIVAL SCENARIO**

1. **Performance:** Participate in a Space Survival Scenario
2. **Conditions:**
  - a. Given:
    - (1) Survival kit list;
    - (2) Survival scenario;
    - (3) Supervision; and
    - (4) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with *Space Survival Challenge* and in groups of no more than four, the cadets shall participate in a space survival scenario, to include:
  - a. choosing a limited number of survival items from a given list; and
  - b. discussing chosen survival items.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Method            | Time   | Refs   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|--------|
| TP1 | <p>In groups of no more than four have cadets choose five items from the following survival list to survive in space:</p> <ol style="list-style-type: none"> <li>a. a box of matches;</li> <li>b. 2 x 50 kg tanks of oxygen;</li> <li>c. 20 litre of water;</li> <li>d. 15 m of nylon rope;</li> <li>e. a magnetic compass;</li> <li>f. a stellar map of the Moon's constellations;</li> <li>g. a solar-powered receiver-transmitter; and</li> <li>h. a reconstituted food package.</li> </ol> | In-Class Activity | 15 min | C3-111 |
| TP2 | Have the cadets explain why they chose their items for survival.                                                                                                                                                                                                                                                                                                                                                                                                                               | Group Discussion  | 10 min |        |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. In-Class Activity: 15 min
  - c. Group Discussion: 10 min
  - d. Total: 30 min

6. **Substantiation:**

- a. An in-class activity was chosen for TP1 as it is an interactive way to provoke thought and stimulate an interest in space survival among cadets.
- b. A group discussion was chosen for TP2 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about the topic.

7. **References:** C3-111 Lakeland Central School District. (2007). *Space Survival Challenge*. Retrieved February 27, 2007, from <http://www.lakelandschools.org/EDTECH/leslie/space.htm>.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
- b. Survival kit list; and
- c. Survival scenario.

9. **Learning Aids:**

- a. Survival kit list; and
- b. Survival scenario.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO C240.01 – PARTICIPATE IN A NON-VERBAL COMMUNICATION ACTIVITY**

1. **Performance:** Participate in a Non-verbal Communication Activity
2. **Conditions:**
  - a. Given:
    - (1) Cue cards;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with *Communication in the Workplace: Non-verbal Communication (Body Language)*, the cadet shall participate in a non-verbal communication activity to gain a familiarization with an alternate method of communication.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                | Method              | Time   | Refs   |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------|
| TP1 | Explain the use of body language as a form of non-verbal communication.                                                                                                                                                                                                                                                                                                                                                    | Interactive Lecture | 5 min  | C3-104 |
| TP2 | Explain the use of gestures as a form of non-verbal communication, to include: <ol style="list-style-type: none"> <li>a. waving;</li> <li>b. making a fist;</li> <li>c. thumbs up; and</li> <li>d. pointing.</li> </ol>                                                                                                                                                                                                    | Interactive Lecture | 5 min  | C3-104 |
| TP3 | Conduct an activity where the cadets name an emotion that they have shown in the last week, such as: <ol style="list-style-type: none"> <li>a. sorrow;</li> <li>b. fear;</li> <li>c. satisfaction;</li> <li>d. surprise;</li> <li>e. happiness; and</li> <li>f. anger.</li> </ol> <p><b>Note:</b> Have the cadets take turns acting out an emotion without verbal communication. Have the group determine the emotion.</p> | In-Class Activity   | 15 min | C3-104 |

5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 10 min |
| c. In-Class Activity:         | 15 min |
| d. Total:                     | 30 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 and TP2 to orient the cadets to the topic, generate interest and to give an overview of non-verbal communication.
- b. An in-class activity was chosen for TP3 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:** C3-104 Australian Government, Department of Education, Science and Training. (2007). *Communication in the Workplace: Non-verbal Communication (Body Language)*. Retrieved 22 February 2007, from [http://www.dest.gov.au/nwt/hospitality/comm\\_non.htm](http://www.dest.gov.au/nwt/hospitality/comm_non.htm).

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- b. Cue cards.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO C240.02 – INVENT A COMMUNICATION SYSTEM FOR SPACE**

1. **Performance:** Invent a Communication System for Space
2. **Conditions:**
  - a. Given:
    - (1) Message cue cards;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with *Two-way Radio Communication Failure*, and in groups of no more than four, the cadets shall invent a communication system for space.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                       | Method              | Time   | Refs   |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------|
| TP1 | Explain that astronauts use radio communication while in space to communicate with other astronauts and ground control.                                                                                                                           | Interactive Lecture | 5 min  | C3-135 |
| TP2 | Conduct an activity where cadets invent a communication system for space, to include: <ol style="list-style-type: none"> <li>a. a system that does not require speech; and</li> <li>b. a system that does not allow for written words.</li> </ol> | In-Class Activity   | 40 min |        |
| TP3 | Conduct a group discussion where cadets share their communication system invention with the entire group.                                                                                                                                         | Group Discussion    | 10 min |        |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 5 min
  - c. In-Class Activity: 40 min
  - d. Group Discussion: 10 min
  - e. Total: 60 min
6. **Substantiation:**
  - a. An interactive lecture was chosen for TP1 to orient the cadets to space communication, to give an overview of it and to generate interest in the subject.

- b. An in-class activity was chosen for TP2 as it is an interactive way to present the content and stimulate an interest among cadets.
  - c. A group discussion was chosen for TP3 as it allows the cadets to interact with their peers and share their knowledge, experience, opinions and feelings about space communication.
- 7. **References:** C3-135 Virtual Skies. (2007). *Two-way Radio Communication Failure (Aeronautical Information Manual Section 6.4.1)*. Retrieved March 18, 2007, from [http://virtualskies.arc.nasa.gov/communication/youDecide/AIM6\\_4\\_1.html](http://virtualskies.arc.nasa.gov/communication/youDecide/AIM6_4_1.html).
  - 8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
  - 9. **Learning Aids:** Message cue cards.
  - 10. **Test Details:** N/A.
  - 11. **Remarks:** N/A.

**EO C240.03 – IDENTIFY PARTS OF A ROCKET**

1. **Performance:** Identify Parts of a Rocket
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with *Rocket Parts*, the cadet shall identify parts of a rocket to become familiar with its components.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Method              | Time   | Refs   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------|
| TP1 | Explain the following parts of a rocket: <ol style="list-style-type: none"> <li>a. the structure system, to include:               <ol style="list-style-type: none"> <li>(1) the nose cone;</li> <li>(2) fuel;</li> <li>(3) the frame;</li> <li>(4) the oxidizer;</li> <li>(5) the pumps;</li> <li>(6) the nozzle; and</li> <li>(7) the fin;</li> </ol> </li> <li>b. the propulsion system;</li> <li>c. the payload system; and</li> <li>d. the guidance system.</li> </ol> | Interactive Lecture | 15 min | C3-106 |
| TP2 | Conduct an activity naming the parts of a rocket.                                                                                                                                                                                                                                                                                                                                                                                                                            | In-Class Activity   | 10 min | C3-106 |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 15 min
  - c. In-Class Activity: 10 min
  - d. Total: 30 min

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to orient the cadets to the parts of a rocket, generate interest and present basic material.
- b. An in-class activity was chosen for TP2 as it is an interactive way to confirm the cadet's comprehension of the material.

7. **References:** C3-106 NASA. (2006). *Rocket Parts*. Retrieved 22 February 2007, from <http://exploration.grc.nasa.gov/education/rocket/rockpart.html#>.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:**

- a. Rocket parts puzzle; and
- b. Parts of a rocket handout.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO C240.04 – NAVIGATE WITH A GLOBAL POSITIONING SYSTEM (GPS)**

1. **Performance:** Navigate With a Global Positioning System (GPS)
2. **Conditions:**
  - a. Given:
    - (1) GPS (one per five cadets) (Type TBD);
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Field setting during the day, large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, and in a group of no more than five, the cadet shall navigate with a GPS on a field exercise.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Method                        | Time   | Refs                             |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------|----------------------------------|
| TP1 | Describe the GPS, to include: <ol style="list-style-type: none"> <li>a. what is a GPS;</li> <li>b. how accurate is a GPS;</li> <li>c. the GPS satellite system; and</li> <li>d. the source of GPS signal errors.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Interactive Lecture           | 5 min  | See Remarks para 11.b.<br>C3-117 |
| TP2 | Explain what a GPS tells the user, to include: <ol style="list-style-type: none"> <li>a. standard features, to include:               <ol style="list-style-type: none"> <li>(1) your position – coordinates and elevation;</li> <li>(2) distance to a waypoint;</li> <li>(3) speed of travel;</li> <li>(4) direction of travel (may not work in low speeds);</li> <li>(5) estimated time of arrival; and</li> <li>(6) cross track error (lateral distance off a straight line course); and</li> </ol> </li> <li>b. extra features, to include:               <ol style="list-style-type: none"> <li>(1) built-in maps;</li> <li>(2) sunrise/sunset;</li> <li>(3) signal strength indicators;</li> <li>(4) battery strength indicators;</li> <li>(5) audible alarm; and</li> <li>(6) course deviation errors.</li> </ol> </li> </ol> | Demonstration and Performance | 10 min | See Remarks para 11.b.<br>C3-117 |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                       | Method             | Time   | Refs                             |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------|----------------------------------|
| TP3 | Operate the GPS, to include:<br>a. turn on and initialize the GPS;<br>b. review the various screens;<br>c. identify battery strength;<br>d. locate your current grid reference;<br>e. identify your direction of travel;<br>f. set your current waypoint;<br>g. set a waypoint (not your current position);<br>h. set the go-to to a preset waypoint; and<br>i. turn off the GPS. | Practical Activity | 20 min | See Remarks para 11.b.<br>C3-117 |
| TP4 | Navigate a route.                                                                                                                                                                                                                                                                                                                                                                 | Practical Activity | 50 min |                                  |

5. **Time:**

- |                                   |        |
|-----------------------------------|--------|
| a. Introduction / Conclusion:     | 5 min  |
| b. Interactive Lecture:           | 5 min  |
| c. Demonstration and Performance: | 10 min |
| d. Practical Activity:            | 70 min |
| e. Total:                         | 90 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 to introduce a new subject and give an overview of GPS navigation.
- Demonstration and performance was chosen for TP2 as it allows the instructor to explain and demonstrate navigating with a GPS while providing an opportunity for the cadet to practice the skill under supervision.
- A practical activity was chosen for TP3 and TP4 as it is an interactive way to introduce cadets to navigating with a GPS. This activity contributes to the development of these skills and knowledge in a fun and challenging setting.

7. **References:**

- See Remarks 11.b.
- C3-117 (ISBN 0-96-522025-7) Ferguson, M. H. (1996). *GPS Land Navigation: A Complete Guide Book for Backcountry Users of the NAVSTAR Satellite System*. Calgary, AB: Glassford Publishing.
- C3-132 (ISBN 1-894765-48-6) Letham, L. (2003). *GPS Made Easy*. Surrey, BC: Rocky Mountain Books.

8. **Training Aids:**

- GPS (Type TBD); and
- GPS User's Guide.

9. **Learning Aids:** GPS (one per five cadets) (Type TBD).
10. **Test Details:** N/A.
11. **Remarks:**
  - a. This lesson will be presented during the field exercise associated with PO 290 (Participate in a Field Exercise).
  - b. The reference information for this EO will be contained in the User's Guide for the GPS selected for training.

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**EO C240.05 – SIMULATE SURVIVAL IN SPACE**

1. **Performance:** Simulate Survival in Space
2. **Conditions:**
  - a. Given:
    - (1) a box of matches;
    - (2) a magnetic compass;
    - (3) a stellar map of the Moon;
    - (4) two military water cans (to simulate oxygen tanks);
    - (5) four two-litre bottles to simulate water;
    - (6) ten metres of nylon rope;
    - (7) simulated food boxes;
    - (8) a radio;
    - (9) a fire blanket;
    - (10) a map of the training area;
    - (11) supervision; and
    - (12) assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable indoor or outdoor training area large enough to accommodate the entire group.
3. **Standard:** In accordance with *Space Survival Challenge* and in groups of no more than four, the cadet shall simulate survival in space.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Method            | Time   | Refs   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|--------|
| TP1 | Conduct an in-class activity where cadets choose any five of the following items to survive in space: <ol style="list-style-type: none"> <li>a. a box of matches;</li> <li>b. a compass;</li> <li>c. 2 military water cans (to simulate oxygen tanks);</li> <li>d. 4 two-litre bottles to simulate water;</li> <li>e. 10 metres of nylon rope;</li> <li>f. simulated food boxes;</li> <li>g. a radio;</li> <li>h. a fire blanket; and</li> <li>i. a map of the training area.</li> </ol> | In-Class Activity | 35 min | C3-111 |

| TP  | Description                                                                                     | Method           | Time   | Refs |
|-----|-------------------------------------------------------------------------------------------------|------------------|--------|------|
| TP2 | Conduct a group discussion and have the groups explain why they chose their items for survival. | Group Discussion | 20 min |      |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | In-Class Activity:         | 35 min |
| c. | Group Discussion:          | 20 min |
| d. | Total:                     | 60 min |

6. **Substantiation:**

- An in-class activity was chosen for TP1 as it is an interactive way to reinforce survival in space, provoke thought and stimulate an interest among cadets.
- A group discussion was chosen for TP2 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about survival in space.

7. **References:** C3-111 Lakeland Central School District. (2007). *Space Survival Challenge*. Retrieved 27 February 2007, from <http://www.lakelandschools.org/EDTECH/leslie/space.htm>.8. **Training Aids:** N/A.9. **Learning Aids:**

- a box of matches;
- a magnetic compass;
- a stellar map of the Moon;
- two military water cans (to simulate oxygen tanks);
- four two-litre bottles to simulate water;
- ten metres of nylon rope;
- simulated food boxes;
- a radio;
- a fire blanket; and
- a map of the training area.

10. **Test Details:** N/A.11. **Remarks:** N/A.

**EO C240.06 – DETERMINE DIRECTION USING CONSTELLATIONS ON A FIELD EXERCISE**

1. **Performance:** Determine Direction Using Constellations on a Field Exercise
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Field setting during night large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall determine direction using constellations on a field exercise.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                         | Method                        | Time   | Refs                                         |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------|----------------------------------------------|
| TP1 | Determine direction at night using Polaris, to include: <ol style="list-style-type: none"> <li>a. locating Polaris using Cassiopeia and the Big Dipper; and</li> <li>b. determining north using Polaris.</li> </ol> | Demonstration and Performance | 25 min | C2-008 (pp. 356–353)<br>C2-041 (pp. 133–134) |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Demonstration and Performance: 25 min
  - c. Total: 30 min
6. **Substantiation:** Demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate determining direction while providing an opportunity for the cadet to practice this skill under supervision.
7. **References:**
  - a. C2-008 (ISBN 0-00-265314-7) Wiseman, J. (1999). *The SAS Survival Handbook*. Hammersmith, London: HarperCollins Publishers.
  - b. C2-041 (ISBN 0-07-136110-3) Seidman, D. with Cleveland, P. (2001). *The Essential Wilderness Navigator*. Camden, ME: Ragged Mountain Press.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** This lesson is to be conducted at night however the knowledge portion of this lesson can be conducted during daylight hours.

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**SECTION 15****PO 260 – PARTICIPATE IN AERODROME OPERATIONS ACTIVITIES**

1. **Performance:** Participate in Aerodrome Operations Activities
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Any conditions.
3. **Standard:** In accordance with specified references, the cadet will participate in aerodrome operations activities, to include:
  - a. air traffic control; and
  - b. basic aerodrome operations.
4. **Remarks:** N/A.
5. **Complementary Material:**
  - a. Complementary material associated with PO 260 is designed to enhance the cadet's knowledge about aerodrome operations:
    - (1) EO C260.01 (Tour an Aerodrome Security Facility);
    - (2) EO C260.02 (Tour an Air Traffic Control [ATC] Tower);
    - (3) EO C260.03 (Participate in a Presentation Given by an Employee of an Aerodrome);
    - (4) EO C260.04 (Perform Marshalling); and
    - (5) EO C260.05 (Tour an Aerodrome).
  - b. Complementary training associated with PO 260 is limited to a total of twelve periods, which may be conducted during sessions or on a supported day. Squadrons are not required to use all twelve periods.

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**EO M260.01 – EXPLAIN ASPECTS OF AIR TRAFFIC CONTROL (ATC)**

1. **Performance:** Explain Aspects of Air Traffic Control (ATC)
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall explain aspects of ATC, to include:
  - a. the role of an air traffic controller;
  - b. a basic overview of radar technology used in ATC; and
  - c. NORDO (without radio) procedures at a controlled airport, to include light signals to aircraft on the ground.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Method              | Time   | Refs                      |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|---------------------------|
| TP1 | Explain the role of an air traffic controller in an aerodrome, to include: <ol style="list-style-type: none"> <li>a. safety as their first concern;</li> <li>b. directing planes to minimize delays;</li> <li>c. preventing collisions by coordinating movement between:               <ol style="list-style-type: none"> <li>(1) aircraft;</li> <li>(2) aircraft and obstructions; and</li> <li>(3) aircraft and vehicles on the manoeuvring area; and</li> </ol> </li> <li>d. providing authorization for:               <ol style="list-style-type: none"> <li>(1) arrivals and departures of aircraft at an aerodrome; and</li> <li>(2) air traffic through controlled airspaces.</li> </ol> </li> </ol> | Interactive Lecture | 10 min | C3-097<br>C3-116 (p. 110) |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Method              | Time   | Refs            |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-----------------|
| TP2 | <p>Provide a basic overview of radar technology used in ATC, to include:</p> <ul style="list-style-type: none"> <li>a. explaining that the name “RADAR” is an abbreviation of “radio detection and ranging”; and</li> <li>b. the principal uses of radar in aviation, to include: <ul style="list-style-type: none"> <li>(1) ATC;</li> <li>(2) fixing positions of airplanes in flight;</li> <li>(3) detecting thunderstorm activity; and</li> <li>(4) approaching and landing guidance to airplanes.</li> </ul> </li> </ul> | Interactive Lecture | 5 min  | C3-116 (p. 249) |
| TP3 | <p>Explain NORDO (without radio) procedures at a controlled airport, to include the following light signals:</p> <ul style="list-style-type: none"> <li>a. departing aircraft; and</li> <li>b. arriving aircraft.</li> </ul>                                                                                                                                                                                                                                                                                                 | Interactive Lecture | 10 min | C3-116 (p. 98)  |

5. **Time:**

- a. Introduction / Conclusion: 5 min
- b. Interactive Lecture: 25 min
- c. Total: 30 min

6. **Substantiation:** An interactive lecture was chosen for this lesson to orient the cadets to ATC, give an overview of it, and generate interest.7. **References:**

- a. C3-096 ISSN 1715-7382 Transport Canada. (2006). *Aeronautical Information Manual*. Ottawa, ON: Her Majesty the Queen in Right of Canada.
- b. C3-097 U.S. Department of Labour. (2007). *Air Traffic Controllers*. Retrieved 9 February 2007, from <http://www.bls.gov/oco/ocos108.htm>.
- c. C3-116 A-CR-CCP-263/PT-001/(ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Ltd.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- b. NORDO light signal flash cards.

9. **Learning Aids:** NORDO light signal flash cards.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

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**EO M260.02 – IDENTIFY ASPECTS OF BASIC AERODROME OPERATIONS**

1. **Performance:** Identify Aspects of Basic Aerodrome Operations
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify aspects of basic aerodrome operations at a civilian aerodrome, to include:
  - a. ground control duties and responsibilities;
  - b. the ground facilities that assist with aircraft arrivals and departures;
  - c. airport security; and
  - d. baggage handling security procedures.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                      | Method              | Time  | Refs   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------|
| TP1 | Discuss basic aerodrome operations, to include: <ol style="list-style-type: none"> <li>a. air traffic control;</li> <li>b. ground control; and</li> <li>c. airport maintenance.</li> </ol>                                                                                                                                                                                                                       | Interactive Lecture | 5 min | C3-099 |
| TP2 | Explain that the role of ground controllers includes: <ol style="list-style-type: none"> <li>a. providing to the pilot precise taxi information to passenger gates and jetways;</li> <li>b. providing marshalling personnel to assist aircraft when arriving and departing from passenger gates and jetways; and</li> <li>c. providing clearance for aircraft-to-taxi on the ground at the aerodrome.</li> </ol> | Interactive Lecture | 5 min | C3-099 |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Method              | Time   | Refs   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------|
| TP3 | <p>Explain that the following ground facilities and services assist with aircraft arrivals and departures, to include:</p> <ul style="list-style-type: none"> <li>a. runway maintenance;</li> <li>b. runway lighting;</li> <li>c. baggage handling;</li> <li>d. fuel storage systems; and</li> <li>e. de-icing/anti-icing.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Interactive Lecture | 5 min  | C3-099 |
| TP4 | <p>Explain what the Canadian Air Transport Security Authority (CATSA) is and outline its duties.</p> <ul style="list-style-type: none"> <li>a. It is a crown corporation based in the national capital region and it reports to Parliament through the Minister of Transport.</li> <li>b. It works with ground control to protect the public by securing critical elements of the air transportation system as assigned by the government.</li> <li>c. It ensures passengers are aware of packing restrictions.</li> <li>d. Its duties and responsibilities include: <ul style="list-style-type: none"> <li>(1) pre-board screening of passengers and their belongings;</li> <li>(2) the acquisition, deployment, operation and maintenance of explosive detection systems at airports;</li> <li>(3) contracting for RCMP policing services on selected flights and all flights to Reagan National Airport, Washington, DC;</li> <li>(4) the implementation of a restricted area identification card;</li> <li>(5) the screening of non-passengers entering airport restricted areas; and</li> <li>(6) making contributions for supplemental airport policing services.</li> </ul> </li> </ul> <p><b>Note:</b> Refer to the CATSA Website for an up-to-date list of packing restrictions for air travellers.</p> | Interactive Lecture | 10 min | C3-098 |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 25 min
  - c. Total: 30 min
6. **Substantiation:** An interactive lecture was chosen for this lesson to orient the cadets to basic aerodrome operations, to generate interest and to give an overview of it.
7. **References:**
  - a. C3-098 Canadian Air Transport Security Authority (CATSA). (2007). *Canadian Air Transport Security Authority-Mandate*. Retrieved 19 February 2007, from [http://www.catsa-acsta.gc.ca/english/about\\_propos/](http://www.catsa-acsta.gc.ca/english/about_propos/).
  - b. C3-099 Airport Innovation. (2007). *Airport Ground Control Equipment*. Retrieved 21 February 2007, from [http://www.airportinnovation.com/airport\\_ground.php](http://www.airportinnovation.com/airport_ground.php).
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** This lesson is complemented by EO C260.05 (Tour an Aerodrome).

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**EO C260.01 – TOUR AN AERODROME SECURITY FACILITY**

1. **Performance:** Tour an Aerodrome Security Facility
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine the conditions suitable for this training.
3. **Standard:** The cadet shall tour an aerodrome security facility to gain an awareness of security operations within an aerodrome.
4. **Teaching Points:** The tour guide is asked to explain:
  - a. the function of airport security; and
  - b. baggage handling security procedures.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Field Trip :               | 80 min |
| c. Total:                     | 90 min |
6. **Substantiation:** A field trip was chosen for this lesson as it will reinforce the cadet's knowledge of material previously taught in EO M260.02 (Identify Aspects of Basic Aerodrome Operations) through participation in a tour.
7. **References:** N/A.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. This field trip can be completed on a supported day or during a complementary session.
  - b. There is no instructional guide for this EO.

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**EO C260.02 – TOUR AN AIR TRAFFIC CONTROL (ATC) TOWER**

1. **Performance:** Tour an Air Traffic Control (ATC) Tower
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine the conditions suitable for this training.
3. **Standard:** The cadet shall tour an active CF/civilian ATC tower to gain an awareness of the importance of ATC within aerodrome activities.
4. **Teaching Points:** The tour guide is asked to explain:
  - a. the role of air traffic controller, to include:
    - (1) safety as their first concern;
    - (2) directing planes to minimize delays;
    - (3) preventing collisions by coordinating movement between:
      - (a) aircraft;
      - (b) aircraft and obstructions; and
      - (c) aircraft and vehicles on the manoeuvring area.
    - (4) providing authorization for:
      - (a) arrivals and departures of aircraft at an aerodrome; and
      - (b) air traffic through controlled airspace;
  - b. a basic overview of radar technology used in air traffic control, to include:
    - (1) explaining that the name radar is an abbreviation of “radio detection and ranging”; and
    - (2) the principal uses of radar in aviation, to include:
      - (a) air traffic control;
      - (b) fixing positions of aircraft in flight;
      - (c) detecting thunderstorm activity; and
      - (d) approaching and landing guidance to aircraft; and
  - c. NORDO (without radio) procedures at a controlled airport, to include the following light signals:
    - (1) aircraft on the ground; and
    - (2) aircraft in the air.

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 10 min |
| b. | Field Trip :               | 80 min |
| c. | Total:                     | 90 min |

6. **Substantiation:** A field trip was chosen for this lesson to reinforce the cadet's knowledge of material previously taught in EO M260.01 (Explain Aspects of Air Traffic Control [ATC]).

7. **References:** N/A.

8. **Training Aids:** N/A.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:**

- a. This field trip can be completed on a supported day or during a complementary session.
- b. There is no instructional guide for this EO.

**EO C260.03 – PARTICIPATE IN A PRESENTATION GIVEN BY AN EMPLOYEE OF AN AERODROME**

1. **Performance:** Participate in a Presentation Given by an Employee of an Aerodrome
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough for the entire group.
3. **Standard:** The cadet shall participate in a presentation given by an employee of an aerodrome to develop an awareness of the various occupational opportunities within aerodrome operations.
4. **Teaching Points:** The guest speaker is asked to:
  - a. describe their current occupation at the aerodrome, to include:
    - (1) their responsibilities in detail;
    - (2) their working environment; and
    - (3) the training and educational training required;
  - b. describe other occupations at the aerodrome; and
  - c. facilitate a question and answer period.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Presentation:              | 55 min |
| c. Total:                     | 60 min |
6. **Substantiation:** An interactive lecture method was chosen for this lesson to review, emphasize and summarize the teaching points.
7. **References:** N/A.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Required training aids should be determined by contacting the guest speaker prior to the presentation.
  - b. This EO can be conducted in conjunction with EO C260.05 (Tour an Aerodrome).
  - c. There is no instructional guide for this EO.

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**EO C260.04 – PERFORM MARSHALLING**

1. **Performance:** Perform Marshalling
2. **Conditions:**
  - a. Given:
    - (1) Marshalling wands, or lighted hand-held wands;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Darkened work area suitable for practicing marshalling motions.
3. **Standard:** In accordance with specified references and as a member of a group of no more than four, the cadet shall perform marshalling movements, to include:
  - a. stop;
  - b. move ahead;
  - c. move back;
  - d. turn left;
  - e. turn right;
  - f. slow down;
  - g. all clear;
  - h. cut engines; and
  - i. start engines.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                            | Method              | Time  | Refs             |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|------------------|
| TP1 | Discuss the importance of marshalling at an aerodrome, to include: <ol style="list-style-type: none"> <li>a. why it is used;</li> <li>b. when it is used; and</li> <li>c. where it is used.</li> </ol> | Interactive Lecture | 5 min | C0-057<br>C3-133 |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Method                        | Time   | Refs                               |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------|------------------------------------|
| TP2 | <p>Demonstrate and allow cadets to practice the following marshalling signals:</p> <ul style="list-style-type: none"> <li>a. stop;</li> <li>b. move ahead;</li> <li>c. move back;</li> <li>d. turn left;</li> <li>e. turn right;</li> <li>f. slowdown;</li> <li>g. all clear;</li> <li>h. cut engines; and</li> <li>i. start engines.</li> </ul> <p><b>Note:</b> Cadets shall be told that in the real environment, marshalling signals are to be executed while positioned forward of the left wing tip and within view of the pilot.</p> | Demonstration and Performance | 10 min | C0-057<br>C3-116 (p. 98)<br>C3-133 |
| TP3 | <p>Allow cadets to practice the different marshalling signals, through:</p> <ul style="list-style-type: none"> <li>a. role-playing; or</li> <li>b. playing Simon Says.</li> </ul>                                                                                                                                                                                                                                                                                                                                                          | Game                          | 10 min |                                    |

5. **Time:**

- |                                   |        |
|-----------------------------------|--------|
| a. Introduction / Conclusion:     | 5 min  |
| b. Interactive Lecture:           | 5 min  |
| c. Demonstration and Performance: | 10 min |
| d. Game:                          | 10 min |
| e. Total:                         | 30 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to present basic material, to orient the cadets to marshalling and to generate interest.
- b. Demonstration and performance was chosen for TP2 as it allows the instructor to explain and demonstrate the marshalling skills the cadet is expected to acquire while providing an opportunity for the cadets to practice marshalling under supervision.
- c. A game was chosen for TP3 as it is a fun and challenging way to practice the marshalling skills taught during the lesson and confirm the cadets' knowledge of the material.

7. **References:**

- a. C0-057 Marshalling Signals. (2006). *Aeronautical Information Manual*. Retrieved 26 September 2006, from <http://www.tc.gc.ca/CivilAviation/publications/tp1437/AIR/1-1.htm#1-8>.

- b. C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Ltd.
- 8. **Training Aids:**
  - a. Flash cards; and
  - b. Marshalling wands, or lighted hand-held wands.
- 9. **Learning Aids:**
  - a. Flash cards; and
  - b. Marshalling wands, or lighted hand-held wands.
- 10. **Test Details:** N/A.
- 11. **Remarks:** Darkened work areas may include the outdoors at night or a darkened classroom during the day.

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**EO C260.05 – TOUR AN AERODROME**

1. **Performance:** Tour an Aerodrome
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine the conditions suitable for this training.
3. **Standard:** The cadet shall tour an active CF/civilian aerodrome in order to develop an appreciation for the aerodrome operations.
4. **Teaching Points:** The tour guide is asked to identify and give a brief explanation of:
  - a. the air traffic control facility;
  - b. baggage handling procedures on and off the aircraft;
  - c. airport security;
  - d. the ground facilities that assist with aircraft arrivals and departures; and
  - e. ground control procedures.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Field Trip :               | 80 min |
| c. Total:                     | 90 min |
6. **Substantiation:** A field trip was chosen for this lesson as it will reinforce the cadets' knowledge of material previously taught in EO M260.02 (Identify Aspects of Basic Aerodrome Operations).
7. **References:** N/A.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. This field trip can be completed on a supported day or during a complementary session.
  - b. There is no instructional guide for this EO.

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**SECTION 16****PO 270A – DISCUSS AIRCRAFT MANUFACTURING AND MAINTENANCE**

1. **Performance:** Discuss Aircraft Manufacturing and Maintenance
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Any conditions.
3. **Standard:** In accordance with specified references, the cadet shall discuss aircraft manufacturing and maintenance and education and employment opportunities in the industry.
4. **Remarks:** N/A.
5. **Complementary Material:**
  - a. Complementary material associated with PO 270 is designed to enhance the cadet's knowledge of aircraft manufacturing and maintenance:
    - (1) EO C270.01 (Participate in a Presentation Given by an Employee in the Aircraft Manufacturing or Maintenance Industry).
    - (2) EO C270.02 (Identify Canadian Aviation Maintenance Council [CAMC] Interactive Multimedia Learning Tool (IMLT) Activities).
    - (3) EO C270.03 (Tour an Aircraft Manufacturing or Maintenance Facility).
    - (4) EO C270.04 (Watch *World's Biggest Airliner: The Airbus A380 – Coming Together*).
  - b. Complementary training associated with PO 270 is limited to a total of eight periods, which may be conducted during sessions or on a supported day. Squadrons are not required to use all eight periods.

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**EO M270.01 – IDENTIFY ASPECTS OF AIRCRAFT MANUFACTURING**

1. **Performance:** Identify Aspects of Aircraft Manufacturing
2. **Conditions:**
  - a. Given:
    - (1) Career information cards;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify aspects of aircraft manufacturing, to include:
  - a. aircraft systems;
  - b. the materials used in aircraft manufacturing; and
  - c. careers within the aircraft manufacturing industry.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Method              | Time   | Refs                                                       |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------------------------------------------------|
| TP1 | Identify aircraft systems, to include: <ol style="list-style-type: none"> <li>a. aircraft instrument systems;</li> <li>b. airframe electrical systems;</li> <li>c. hydraulic and pneumatic power systems;</li> <li>d. aircraft landing gear systems; and</li> <li>e. aircraft fuel systems.</li> </ol>                                                                                                                                                                                                  | Interactive Lecture | 15 min | C3-108 (p. 7-1, p. 8-1, p. 9-1, p. 11-1, p. 12-1, p. 15-1) |
| TP2 | Identify the following materials used in aircraft manufacturing: <ol style="list-style-type: none"> <li>a. non-ferrous metals, to include:               <ol style="list-style-type: none"> <li>(1) aluminum and its alloys;</li> <li>(2) titanium;</li> <li>(3) nickel; and</li> <li>(4) copper; and</li> </ol> </li> <li>b. composite fibres, to include:               <ol style="list-style-type: none"> <li>(1) graphite;</li> <li>(2) kevlar; and</li> <li>(3) fibreglass.</li> </ol> </li> </ol> | Interactive Lecture | 15 min | C3-108 (p. 7-1)                                            |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                        | Method           | Time   | Refs             |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------|------------------|
| TP3 | Discuss careers within the aircraft manufacturing industry, to include:<br>a. aircraft interior technician;<br>b. aircraft maintenance engineer category "E" (avionics);<br>c. aircraft maintenance engineer category "M" (maintenance);<br>d. aircraft maintenance engineer category "S" (structures);<br>e. aircraft mechanical component technician; and<br>f. aircraft gas turbine technician. | Group Discussion | 20 min | C3-107<br>C3-109 |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 10 min |
| b. | Interactive Lecture:       | 30 min |
| c. | Group Discussion:          | 20 min |
| d. | Total:                     | 60 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 and TP2 to introduce aircraft manufacturing and generate interest.
- A group discussion method was chosen for TP3 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about aircraft manufacturing.

7. **References:**

- C3-107 British Columbia Institute of Technology. (2007). *Programs and Courses*. Retrieved 8 February 2007, from <http://www.bcit.ca/study/programs/>.
- C3-108 (ISBN 0 88487 203 3) Jeppesen Sanderson Training Products. (2000). *A&P Technician: General*. Englewood, CO: Jeppesen Sanderson Inc.
- C3-109 (ISBN 1 894777 00 X) Canadian Aviation Maintenance Council (CAMC). (2002). *Aviation Maintenance Orientation Program*. Ottawa, ON: CAMC.

8. **Training Aids:**

- Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- Career information sheets.

9. **Learning Aids:** Career information sheets.10. **Test Details:** N/A.11. **Remarks:** N/A.

**EO M270.02 – IDENTIFY REQUIREMENTS FOR AIRCRAFT MAINTENANCE**

1. **Performance:** Identify Requirements for Aircraft Maintenance
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom or training facility large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify requirements for aircraft maintenance, to include:
  - a. maintaining aircraft systems; and
  - b. aircraft system maintenance, repair and overhaul employers.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                            | Method              | Time   | Refs               |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------|
| TP1 | Introduce aircraft maintenance, overhaul and repair, to include: <ol style="list-style-type: none"> <li>a. aircraft instrument systems;</li> <li>b. airframe electrical systems;</li> <li>c. hydraulic and pneumatic power systems;</li> <li>d. aircraft landing gear systems; and</li> <li>e. aircraft fuel systems.</li> </ol>                       | Interactive Lecture | 10 min | C3-109             |
| TP2 | Discuss the maintenance of aircraft instruments, to include: <ol style="list-style-type: none"> <li>a. the altimeter;</li> <li>b. the air speed indicator;</li> <li>c. the gyroscope;</li> <li>d. the heading indicator;</li> <li>e. the attitude indicator;</li> <li>f. the vertical speed indicator; and</li> <li>g. the radar altimeter.</li> </ol> | Interactive Lecture | 20 min | C3-116 (pp. 39–50) |
| TP3 | Discuss landing gear maintenance, to include: <ol style="list-style-type: none"> <li>a. fixed undercarriage;</li> <li>b. retractable gear;</li> <li>c. nose wheel; and</li> <li>d. tail wheel.</li> </ol>                                                                                                                                              | Interactive Lecture | 20 min | C3-116 (pp. 12–14) |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 10 min |
| b. | Interactive Lecture:       | 50 min |
| c. | Total:                     | 60 min |

6. **Substantiation:** An interactive lecture was chosen for this lesson to orient the cadets to aircraft maintenance, generate an interest and present basic material.

7. **References:**

- a. C3-109 (ISBN 1-894777-00-X) Canadian Aviation Maintenance Council (CAMC). (2002). *Aviation Maintenance Orientation Program*. Ottawa, ON: CAMC.
- b. C3-116 A-CR-CCP-263/PT-001 (ISBN 0-9680390-5-7) MacDonald, A. F. and Peppler, I. L. (2000). *From the Ground Up: Millennium Edition*. Ottawa, ON: Aviation Publishers Co. Ltd.

8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

## EO M270.03 – DISCUSS EDUCATION AND EMPLOYMENT OPPORTUNITIES IN AIRCRAFT MANUFACTURING AND MAINTENANCE

1. **Performance:** Discuss Education and Employment Opportunities in Aircraft Manufacturing and Maintenance
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** In accordance with the specified references, the cadet shall discuss education and employment opportunities in the aircraft manufacturing and maintenance industry, to include:
  - a. employers in Canada;
  - b. career options; and
  - c. education and training institutions in Canada.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                              | Method            | Time   | Refs             |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|------------------|
| TP1 | Conduct an in-class activity where cadets are introduced to the aircraft manufacturing and maintenance industry, to include: <ol style="list-style-type: none"> <li>a. employers in Canada;</li> <li>b. careers options; and</li> <li>c. education and training institutions.</li> </ol> | In-Class Activity | 50 min | C3-101<br>C3-102 |

5. **Time:**
  - a. Introduction / Conclusion: 10 min
  - b. In-Class Activity: 50 min
  - c. Total: 60 min
6. **Substantiation:** An in-class activity was chosen for this lesson as it is an interactive way to present education and employment opportunities in the aircraft manufacturing and maintenance industry and to stimulate an interest among cadets.
7. **References:**
  - a. C3-101 Canadian Aviation Maintenance Council. (2006). *Careers in Aviation and Aerospace*. Ottawa, ON: Government of Canada's Sector Council Program.
  - b. C3-102 Canadian Aviation Maintenance Council. (2007). Index of Corporate Profiles. Retrieved 23 February 2007, from <http://www.camc.ca/en/CorporateProfiles/>.

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
- b. Career reference sheets.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:** N/A.

**EO C270.01 – PARTICIPATE IN A PRESENTATION GIVEN BY AN EMPLOYEE IN THE AIRCRAFT MANUFACTURING OR MAINTENANCE INDUSTRY**

1. **Performance:** Participate in a Presentation Given by an Employee in the Aircraft Manufacturing or Maintenance Industry
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough for the entire group.
3. **Standard:** The cadet shall participate in a presentation given by an employee in the aircraft manufacturing or maintenance industry to gain an awareness of the various occupational opportunities.
4. **Teaching Points:** The guest speaker is asked to:
  - a. familiarize the cadets with the occupational opportunities within the aircraft manufacturing and maintenance industry, to include:
    - (1) identifying the various occupations;
    - (2) explaining the duties and responsibilities of the various occupations; and
    - (3) identifying educational institutions that provide training for the various occupations; and
  - b. facilitate a question and answer period.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Presentation:              | 50 min |
| c. Total:                     | 60 min |

6. **Substantiation:** An interactive lecture was chosen for this lesson to review, emphasize and summarize the teaching points.
7. **References:** N/A.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Required training aids should be determined by contacting the guest speaker prior to the presentation.
  - b. If the instructor cannot complete all teaching points in 4a for the various occupations, they can focus on their own occupation to complete the lesson.
  - c. There is no instructional guide for this EO.

## EO C270.02 – IDENTIFY CANADIAN AVIATION MAINTENANCE COUNCIL (CAMC) INTERACTIVE MULTIMEDIA LEARNING TOOL (IMLT) ACTIVITIES

1. **Performance:** Identify Canadian Aviation Maintenance Council (CAMC) Interactive Multimedia Learning Tool (IMLT) Activities
2. **Conditions:**
  - a. Given:
    - (1) PowerPoint presentation/handouts;
    - (2) CAMC IMLT log-on;
    - (3) Supervision; and
    - (4) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine the conditions suitable for this training.
3. **Standard:** In accordance with *CAMC Interactive Multimedia Learning Tool*, the cadet shall identify online interactive activities, to include:
  - a. aircraft; and
  - b. aircraft components.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                  | Method              | Time   | Refs   |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------|
| TP1 | Explain the following: <ol style="list-style-type: none"> <li>a. what is CAMC;</li> <li>b. what is Aviation Maintenance Orientation Program (AMOP); and</li> <li>c. what is IMLT.</li> </ol>                 | Interactive Lecture | 10 min | C3-115 |
| TP2 | Explain the IMLT modules, to include: <ol style="list-style-type: none"> <li>a. Module 1 – Theory of Flight;</li> <li>b. Module 2 – Power Plants; and</li> <li>c. Module 3 – Aircraft Structures.</li> </ol> | Interactive Lecture | 15 min | C3-115 |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 25 min
  - c. Total: 30 min

6. **Substantiation:** An interactive lecture method was chosen for this lesson to review, clarify, emphasize and summarize the teaching points. An on-line visit to the IMLT will provide an overview of and promote interest in CAMC activities.
7. **References:** C3-115 Canadian Aviation Maintenance Council (CAMC). (2007). *CAMC Interactive Multimedia Learning Tool (IMLT)*. Retrieved 6 March 2007, from <http://3da.com/imlt/>.
8. **Training Aids:**
  - a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area; and
  - b. PowerPoint presentation/handout.
9. **Learning Aids:** PowerPoint presentation/handout.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Contact your Area Cadet Officer (ACO) to receive a log-on user ID and password.
  - b. Current instructions for exploring the IMLT are provided at <http://3da.com/imlt/>.
  - c. Before proceeding with this lesson, the instructor must become familiar with the procedures involved. The following procedures are to be researched in advance:
    - (1) accessing the internet;
    - (2) logging onto the CAMC IMLT; and
    - (3) operating the IMLT.

**EO C270.03 – TOUR AN AIRCRAFT MANUFACTURING OR MAINTENANCE FACILITY**

1. **Performance:** Tour an Aircraft Manufacturing or Maintenance Facility
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: The squadron Commanding Officer will determine the conditions suitable for this training.
3. **Standard:** The cadet shall tour an aircraft manufacturing or maintenance facility, to identify aspects of:
  - a. aircraft manufacturing systems;
  - b. aircraft systems maintenance; and
  - c. materials used in manufacturing.
4. **Teaching Points:** The tour guide is asked to explain:
  - a. aircraft manufacturing systems;
  - b. avionics;
  - c. aircraft systems maintenance; and
  - d. materials used in manufacturing.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Field Trip :               | 80 min |
| c. Total:                     | 90 min |
6. **Substantiation:** A field trip was chosen for this lesson as it will reinforce the cadet's knowledge of material previously taught in EO M270.01 (Identify Aspects of Aircraft Manufacturing), EO M270.02 (Identify Requirements for Aircraft Maintenance) and EO M270.03 (Discuss Education and Employment Opportunities in Aircraft Manufacturing and Maintenance) through participation in a tour.
7. **References:** N/A.
8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. This field trip can be completed on a supported day or during a complementary session.
  - b. There is no instructional guide for this EO.

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**EO C270.04 – WATCH WORLD’S BIGGEST AIRLINER: THE AIRBUS A380 – COMING TOGETHER**

1. **Performance:** Watch *World’s Biggest Airliner: The Airbus A380 – Coming Together*
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom or training facility large enough to accommodate the entire group.
3. **Standard:** In accordance with *World’s Biggest Airliner: The Airbus A380 – Coming Together*, the cadet shall watch the *World’s Biggest Airliner: The Airbus A380 – Coming Together*, to stimulate an interest in the aircraft manufacturing industry.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                    | Method            | Time   | Refs   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|--------|
| TP1 | Watch and discuss the <i>World’s Biggest Airliner: The Airbus A380 – Coming Together</i> DVD, to include: <ol style="list-style-type: none"> <li>a. what is involved in manufacturing an aircraft; and</li> <li>b. what occupations contribute to the manufacturing of an aircraft.</li> </ol> | In-Class Activity | 45 min | C3-105 |
| TP2 | Conduct a group discussion on The Airbus A380.                                                                                                                                                                                                                                                 | Group Discussion  | 10 min |        |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. In-Class Activity: 45 min
  - c. Group Discussion: 10 min
  - d. Total: 60 min
6. **Substantiation:**
  - a. An in-class activity was chosen for TP1 as it is an interactive way to provoke thought and stimulate interest among cadets.
  - b. A group discussion was chosen for TP2 as it allows the cadet to interact with their peers and share their knowledge, experience, opinions and feelings about the topic.

7. **References:** C3-105 Brisley, T. Pascaud, S. (Executive Producer), and Bowie, B. (Writer/Director), (2003). *World's Biggest Airliner: The Airbus A380* [Motion Picture]. United States: The Learning Channel.
8. **Training Aids:**
  - a. Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/training area;
  - b. *World's Biggest Airliner: The Airbus A380 – Coming Together* DVD;
  - c. TV; and
  - d. DVD player.
9. **Learning Aids:** Handout for each cadet.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

**SECTION 17****PO 290 – PARTICIPATE IN A FIELD EXERCISE**

1. **Performance:** Participate in a Field Exercise
2. **Conditions:**
  - a. Given:
    - (1) Personal equipment;
    - (2) Backpack;
    - (3) Sleeping bag;
    - (4) Matches;
    - (5) Firewood/kindling/tinder;
    - (6) Fire extinguisher;
    - (7) Water;
    - (8) Shovel;
    - (9) Supervision; and
    - (10) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable outdoor training area large enough to accommodate the entire group with a Fire Service rating for lighting fires.
3. **Standard:** In accordance with specified references, the cadet will participate in a field exercise by:
  - a. constructing, lighting, maintaining and extinguishing a signal fire;
  - b. constructing a lean-to-style shelter;
  - c. constructing a simple snare;
  - d. constructing ground-to-air signals;
  - e. participating in a discussion on proper hiking techniques; and
  - f. operating a hand-held radio.
4. **Remarks:** Proficiency Level Two cadets are expected to take part in a minimum of one overnight aircrew survival exercise during the training year:
  - a. Activities during the exercise shall be structured to be group oriented.
  - b. PO 290 will be conducted as a supported weekend.

**5. Complementary Material:**

- a. Complementary material associated with PO 290 is designed to enhance the cadet's aircrew survival skills:
  - (1) EO C190.01 (Participate in a Presentation Given by a Member of a Survival Organization);
  - (2) EO C290.02 (Participate in a Discussion on Skinning and Cooking a Small Animal);
  - (3) EO C290.03 (Construct a Snow Cave);
  - (4) EO C290.04 (Collect Drinking Water Using a Solar Still); and
  - (5) EO C290.05 (Participate in a Hike).
- b. Complementary training associated with PO 290 is limited to a total of 14 periods, which shall be conducted on a supported day. Squadrons are not required to use all 14 periods.

**EO M290.01 – CONSTRUCT, LIGHT, MAINTAIN AND EXTINGUISH A SIGNAL FIRE**

1. **Performance:** Construct, Light, Maintain and Extinguish a Signal Fire
2. **Conditions:**
  - a. Given:
    - (1) String;
    - (2) Matches;
    - (3) Wood/kindling/tinder;
    - (4) Water;
    - (5) Fire extinguishing equipment;
    - (6) Shovel;
    - (7) Supervision; and
    - (8) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Field setting large enough to accommodate the entire group and signal fire construction with a low to moderate rating under the Canadian Forest Fire Danger Rating System (CFFDRS).
3. **Standard:** In accordance with specified references and as a member of a group of no more than 15, the cadet shall construct, light, maintain, and extinguish a signal fire by:
  - a. selecting an appropriate site;
  - b. constructing a signal fire;
  - c. lighting the signal fire;
  - d. maintaining the signal fire for five minutes; and
  - e. extinguishing the signal fire.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                  | Method              | Time  | Refs                      |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|---------------------------|
| TP1 | Determine types of emergency signal fires that will attract rescue aircraft, to include: <ol style="list-style-type: none"> <li>a. a three fire triangle pattern;</li> <li>b. a torch tree; and</li> <li>c. a luminous cone fire.</li> </ol> | Interactive Lecture | 5 min | C3-002 (pp. 504–507)      |
| TP2 | Identify a location to be seen from the air, to include: <ol style="list-style-type: none"> <li>a. elevated ground;</li> <li>b. highly visible; and</li> <li>c. a fuel source.</li> </ol>                                                    | Interactive Lecture | 5 min | C2-016 (p. 240)<br>C3-118 |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Method                        | Time   | Refs                                                   |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------|--------------------------------------------------------|
| TP3 | <p>Demonstrate and have cadets construct a luminous cone signal fire by:</p> <ol style="list-style-type: none"> <li>select and prepare combustible materials, such as: <ol style="list-style-type: none"> <li>tinder;</li> <li>kindling; and</li> <li>fuel; and</li> </ol> </li> <li>construct a luminous cone signal fire in groups of no more than 15 and allow for sufficient ventilation.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Demonstration and Performance | 20 min | C2-042 (pp. 194–195)                                   |
| TP4 | <p>Explain, demonstrate, and have the cadets practice lighting, maintaining, and extinguishing one signal fire, to include:</p> <ol style="list-style-type: none"> <li>lighting a fire with a match;</li> <li>maintaining a fire, to include: <ol style="list-style-type: none"> <li>applying an appropriate amount of fuel;</li> <li>ensuring an appropriate amount of ventilation; and</li> <li>ensuring the fire is contained to a controllable size; and</li> </ol> </li> <li>extinguishing a fire, by: <ol style="list-style-type: none"> <li>ensuring that all sparks have been put out thoroughly by smothering the fire with wet earth, sand and/or water; and</li> <li>filling the fire pit with wet earth or sand.</li> </ol> </li> </ol> <p><b>Note:</b> Fire safety equipment must be on hand during this activity. Additional supervision is required during the lighting of the signal fire.</p> | Demonstration and Performance | 20 min | C2-016<br>C3-002 (pp. 268–275)<br>C3-003 (pp. 122–130) |

5. **Time:**

- |                                   |        |
|-----------------------------------|--------|
| a. Introduction / Conclusion:     | 10 min |
| b. Interactive Lecture:           | 10 min |
| c. Demonstration and Performance: | 40 min |
| d. Total:                         | 60 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 and TP2 to present basic material and give direction on emergency signal fires.
- b. Demonstration and performance was chosen for TP3 and TP4 as it allows the instructor to explain and demonstrate preparing a signal fire while providing an opportunity for the cadets to practice this skill under supervision

7. **References:**

- a. C2-016 (ISBN 0-517-88783-5) Curtis, R. (1998). *The Backpacker's Field Manual: A Comprehensive Guide To Mastering Backcountry Skills*. New York, NY: Three Rivers Press.
- b. C2-042 (ISBN 0-7566-0946-1) Berger, K. (2005). *Backpacking & Hiking*. New York, NY: DK Publishing, Inc.
- c. C3-002 (ISBN 0-00-653140-7) Wiseman, J. (1999). *The SAS Survival Handbook*. Hammersmith, London: HarperCollins Publishers.
- d. C3-003 (ISBN 1-896713-00-9) Tawrell, P. (1996). *Camping and Wilderness Survival: The Ultimate Outdoors Book*. Green Valley, ON: Falcon Distribution.
- e. C3-118 Wilderness Survival. (2007). *Signalling Techniques*. Retrieved 12 March 2007, from <http://www.wilderness-survival.net/chpt19.php>.

8. **Training Aids:**

- a. Matches;
- b. A three fire triangle;
- c. A torch tree;
- d. A luminous cone fire;
- e. Fire extinguishing equipment; and
- f. Shovel.

9. **Learning Aids:**

- a. Matches;
- b. Signal fires;
- c. Wood/kindling/tinder; and
- d. Shovel.

10. **Test Details:** N/A.

11. **Remarks:**

- a. The instructor shall demonstrate lighting the first of the prepared signal fires.
- b. Additional supervision is required during the lighting of the signal fires. Fire safety equipment shall also be present.

- c. Appropriate authorities (e.g. local police, forestry service, and/or airport authority) shall be notified of the lighting of the signal fire to include:
  - (1) squadron contact name;
  - (2) squadron contact number;
  - (3) location including grid reference;
  - (4) estimated time of lighting; and
  - (5) the duration the fire is expected to be lit.

**EO M290.02 – CONSTRUCT A LEAN-TO-STYLE SHELTER**

1. **Performance:** Construct a Lean-to-style Shelter
2. **Conditions:**
  - a. Given:
    - (1) Groundsheets;
    - (2) Knife;
    - (3) Shovel;
    - (4) Pegs;
    - (5) Rope/twine;
    - (6) Natural materials;
    - (7) Supervision; and
    - (8) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Field setting during the day and large enough to accommodate the entire group and shelter construction.
3. **Standard:** In accordance with specified references and as a member of a group of no more than four, the cadet shall construct a lean-to-style shelter by:
  - a. gathering materials;
  - b. selecting a site; and
  - c. tying and lashing cross pieces and supports.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                             | Method              | Time   | Refs                                    |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-----------------------------------------|
| TP1 | <p>Explain the importance of site selection and assist cadets in selecting a site for their lean-to-style shelter. Review the following:</p> <ol style="list-style-type: none"> <li>a. Site selection. Site selection should begin before dark if possible. The shelter should be built near a source of water, building materials (trees, boughs) and fuel.</li> </ol> | Interactive Lecture | 20 min | C3-002 (pp. 242–243)<br>C3-003 (p. 101) |

| TP | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Method | Time | Refs |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------|------|
|    | <p>b. Land considerations. The following points are to be kept in mind:</p> <ul style="list-style-type: none"> <li>(1) The area must be large enough for the planned shelter.</li> <li>(2) The area should not be at the bottom of a hill. It should be relatively flat, but slightly sloped to allow for drainage.</li> <li>(3) Dry river gullies, canyons and flood plains should be avoided.</li> </ul> <p>c. Water considerations. The following points are to be kept in mind:</p> <ul style="list-style-type: none"> <li>(1) The shelter should be built away from the water in order to avoid insects.</li> <li>(2) The shelter should be built away from the source of drinking water.</li> </ul> <p>d. Animal and insect considerations. The following points are to be kept in mind:</p> <ul style="list-style-type: none"> <li>(1) Avoid setting up a shelter where there are animal trails or water holes.</li> <li>(2) Fast flowing streams will have fewer insects nearby than still water.</li> <li>(3) Avoid areas infested with ants or bees.</li> </ul> <p>e. Other considerations. The following points are to be kept in mind:</p> <ul style="list-style-type: none"> <li>(1) There should be an area nearby to construct signals.</li> <li>(2) The entrance of the shelter should face the sun to add warmth and to increase morale.</li> <li>(3) Very thick woods should be avoided as it will be hard to dry the shelter or fuel.</li> <li>(4) Try to find a natural windbreak or a place that is away from strong wind currents.</li> <li>(5) Avoid swampy terrain.</li> <li>(6) A place for a fire should be located in front of the opening of the shelter.</li> </ul> |        |      |      |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Method        | Time   | Refs                                                        |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|-------------------------------------------------------------|
| TP2 | <p>Explain and demonstrate the procedure for constructing a lean-to-style shelter, to include:</p> <p>a. obtaining the appropriate supplies, to include:</p> <ul style="list-style-type: none"> <li>(1) groundsheets;</li> <li>(2) knife;</li> <li>(3) shovel;</li> <li>(4) pegs;</li> <li>(5) rope/twine; and</li> <li>(6) natural materials; and</li> </ul> <p>b. tying and lashing cross-pieces and vertical supports;</p> <p>c. checking each groundsheet for fatigue and holes;</p> <p>d. tying each end of the groundsheet to cross-pieces and supports, ensuring they are to waist height of the tallest person;</p> <p>e. ensuring the groundsheet is pulled tight between the cross-pieces and supports;</p> <p>f. pulling the bottom of the groundsheet out and pegging each grommet to the ground; and</p> <p>g. digging small trenches around the shelter to allow for effective drainage.</p> | Demonstration | 20 min | <p>C3-002 (p. 250)</p> <p>C3-003 (p. 101)</p> <p>C3-118</p> |
| TP3 | Have the cadets, in groups of no more than four, construct a lean-to-style shelter, taking into account the site selection considerations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Performance   | 40 min | A0-039                                                      |

5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Interactive Lecture:       | 20 min |
| c. Demonstration:             | 20 min |
| d. Performance:               | 40 min |
| e. Total:                     | 90 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to present basic material and give direction on procedures.
- b. Demonstration was chosen for TP2 as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire.
- c. Performance was chosen for TP3 as it provides an opportunity for the cadets to practice building a lean-to-style shelter under supervision.

7. **References:**

- a. A0-039 D Cdts 3. (1997). CATO 11-08. *Environmental Protection and Stewardship*. In *CATO Vol. 1 General* (pp.1–11). Ottawa, ON: Department of National Defence.
- b. C3-002 (ISBN 0-00-653140-7) Wiseman, J. (1999). *The SAS Survival Handbook*. Hammersmith, London: HarperCollins Publishers.
- c. C3-003 (ISBN 1-896713-00-9) Tawrell, P. (1996). *Camping and Wilderness Survival: The Ultimate Outdoors Book*. Green Valley, ON: Falcon Distribution.
- d. C3-118 Wilderness Survival. (2007). *Shelters*. Retrieved 9 March 2007, from <http://www.wilderness-survival.net/shelters-2.php>.

8. **Training Aids:**

- a. Groundsheets;
- b. Example of a good shelter site;
- c. Example of a poor shelter site;
- d. Completed lean-to-style shelter for illustration purposes;
- e. Knife;
- f. Shovel;
- g. Pegs; and
- h. Rope/twine.

9. **Learning Aids:**

- a. Groundsheets;
- b. Lengths of rope/twine;
- c. Shovel;
- d. Items found in a natural setting;
- e. Tree branches; and
- f. Pegs.

10. **Test Details:** N/A.

11. **Remarks:**

- a. If lean-to-style shelters cannot be constructed, another style shelter (e.g. a bivouac tent, or a tarpaulin between trees) may be substituted.
- b. The directives found in CATO 11-08, *Environmental Protection and Stewardship*, are to be followed during this lesson.

**EO M290.03 – CONSTRUCT A SIMPLE SNARE**

1. **Performance:** Construct a Simple Snare
2. **Conditions:**
  - a. Given:
    - (1) Non-ferrous wire;
    - (2) Supervision; and
    - (3) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Field setting during the day large enough to accommodate the entire group and suitable for snare construction.
3. **Standard:** In accordance with specified references, and in groups of two, the cadet shall construct a simple snare by:
  - a. selecting a site;
  - b. constructing a simple snare in the selected location; and
  - c. disassembling the snare when completed.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Method        | Time   | Refs                                    |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|-----------------------------------------|
| TP1 | Explain and demonstrate the procedure for constructing a simple snare, to include: <ol style="list-style-type: none"> <li>a. selecting a site;</li> <li>b. making the snare a fist width wide;</li> <li>c. setting it four fingers above the ground and one hand's width from an obstruction on the trail;</li> <li>d. checking that it is securely anchored, with twigs to support the loop in position if necessary; and</li> <li>e. setting the snare a hand's length from a stake or obstruction on a trail.</li> </ol> | Demonstration | 15 min | C3-002 (pp. 186–187)<br>C3-003 (p. 160) |
| TP2 | Construct a simple snare.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Performance   | 35 min | C3-002 (pp. 186–187)<br>C3-003 (p. 160) |

5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Demonstration:             | 15 min |
| c. Performance:               | 35 min |
| d. Total:                     | 60 min |

6. **Substantiation:**

- a. Demonstration was chosen for TP1 as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire.
- b. Performance was chosen for TP2 as it is an interactive way to introduce cadets to constructing a simple snare.

7. **References:**

- a. C3-002 (ISBN 0-00-653140-7) Wiseman, J. (1999). *The SAS Survival Handbook*. Hammersmith, London: HarperCollinsPublishers.
- b. C3-003 (ISBN 1-896713-00-9) Tawrell, P. (1996). *Camping and Wilderness Survival: The Ultimate Outdoors Book*. Green Valley, ON: Falcon Distribution.

8. **Training Aids:**

- a. Non-ferrous wire; and
- b. Example of a simple snare.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:** All snares will be disassembled immediately after completion of the practical exercise.

**EO M290.04 – CONSTRUCT GROUND-TO-AIR SIGNALS**

1. **Performance:** Construct Ground-to-air Signals
2. **Conditions:**
  - a. Given:
    - (1) Shovels;
    - (2) Completed ground-to-air signal for demonstration;
    - (3) Rope;
    - (4) Handout of ground-to-air signals;
    - (5) Supervision; and
    - (6) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Field setting during the day large enough to accommodate the entire group and signal construction.
3. **Standard:** In accordance with specified references, and as a member of a group of no more than four, the cadet shall construct a ground-to-air signal, by:
  - a. selecting a site;
  - b. constructing one of the following ground-to-air signals:
    - (1) require assistance;
    - (2) require medical assistance;
    - (3) proceeding in this direction;
    - (4) all is well; or
    - (5) require food and water; and
  - c. disassembling the signal when the lesson is completed.

**4. Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Method              | Time   | Refs                                |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-------------------------------------|
| TP1 | Discuss ground-to-air signals employed to communicate with aircraft, to include: <ul style="list-style-type: none"> <li>a. signal dimensions;</li> <li>b. creating contrasting shades, or colours; and</li> <li>c. signals, to include:               <ul style="list-style-type: none"> <li>(1) require assistance;</li> <li>(2) require medical assistance;</li> <li>(3) proceeding in this direction;</li> <li>(4) all is well; and</li> <li>(5) require food and water.</li> </ul> </li> </ul> | Interactive Lecture | 15 min | C2-044<br>C3-003 (p. 233)<br>C3-118 |
| TP2 | Construct a ground-to-air signal as a member of group of no more than four.                                                                                                                                                                                                                                                                                                                                                                                                                        | Practical Activity  | 35 min |                                     |

**5. Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Interactive Lecture:       | 15 min |
| c. Practical Activity:        | 35 min |
| d. Total:                     | 60 min |

**6. Substantiation:**

- a. An interactive lecture was chosen for TP1 to introduce methods of signalling to the cadets.
- b. A practical activity was chosen for TP2 as it is an interactive way to introduce cadets to methods of signalling and allows the cadets an opportunity to practice. This activity contributes to the development of survival skills in a fun and challenging setting.

**7. References:**

- a. C2-044 Transport Canada (2007). *Ground-to-Air Signals*. Retrieved 9 February 2007, from <http://www.tc.gc.ca/CivilAviation/publications/tp14371/SAS/4-0.htm>.
- b. C3-003 (ISBN 1-896713-00-9) Tawrell, P. (1996). *Camping and Wilderness Survival: The Ultimate Outdoors Book*. Green Valley, ON: Falcon Distribution.
- c. C3-118 Wilderness Survival. (2007). *Signalling Techniques*. Retrieved 12 March 2007, from <http://www.wilderness-survival.net/chpt19.php>.

**8. Training Aids:**

- a. Shovel;
- b. Completed ground to air signal for demonstration;
- c. Rope; and
- d. Handout.

9. **Learning Aids:** N/A.

10. **Test Details:** N/A.

11. **Remarks:**

- a. All materials used in the construction of ground-to-air signals will be from the surrounding environment.
- b. All ground-to-air signals should be removed and returned to the environment after the completion of the practical activity.

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**EO M290.05 – IDENTIFY HIKING TECHNIQUES**

1. **Performance:** Identify Hiking Techniques
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable indoor or outdoor training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall identify hiking techniques, to include:
  - a. identifying daily water requirements;
  - b. identifying proper footwear; and
  - c. identifying proper hiking rhythm.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Method              | Time   | Refs                 |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------|
| TP1 | <p>Explain potable water requirements for consumption during a day hike, to include:</p> <ol style="list-style-type: none"> <li>a. daily water requirements, to include:               <ol style="list-style-type: none"> <li>(1) performance-related water loss; and</li> <li>(2) daily water intake by weight; and</li> </ol> </li> <li>b. maintaining safe hydration levels, to include:               <ol style="list-style-type: none"> <li>(1) pre-hydrating;</li> <li>(2) drinking small amounts often;</li> <li>(3) avoiding sugar and caffeine drinks; and</li> <li>(4) routinely drinking water.</li> </ol> </li> </ol> | Interactive Lecture | 15 min | C2-009 (pp. 139–141) |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Method              | Time   | Refs                                            |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-------------------------------------------------|
| TP2 | <p>Explain the optimum characteristics of hiking footwear, to include:</p> <ul style="list-style-type: none"> <li>a. sturdy and lightweight;</li> <li>b. comfortable (snug fit);</li> <li>c. sized correctly (can wiggle toes);</li> <li>d. snug against the heel;</li> <li>e. equipped with a tongue which rests comfortably along the top of the toe; and</li> <li>f. wide enough so that the boot matches the width of the foot (should have a little extra room).</li> </ul>                                                    | Interactive Lecture | 15 min | <p>C2-017 (pp. 22–25)</p> <p>C2-012 (p. 26)</p> |
| TP3 | <p>Explain personal hiking rhythm, to include:</p> <ul style="list-style-type: none"> <li>a. determining stride rhythm and speed through a fixed pace that can be maintained throughout the hike, for a period of an hour at a time;</li> <li>b. controlling fatigue by stopping for scheduled rest periods of 10 minutes each, approximately an hour apart;</li> <li>c. adjusting rhythm to account for terrain, weather and weight; and</li> <li>d. employing full body synchronization, thus enhancing hiking rhythm.</li> </ul> | Interactive Lecture | 20 min | C2-010                                          |

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Interactive Lecture:       | 50 min |
| c. Total:                     | 60 min |

6. **Substantiation:** An interactive lecture was chosen for TP1 to TP3 to present background material to the cadets.7. **References:**

- a. C2-009 (ISBN 0-684-85909-2) Harvey, M. (1999). *The National Outdoor Leadership School's Wilderness Guide*. New York, NY: Fireside.
- b. C2-010 (ISBN 0-375-70323-3) Rawlins, C., and Fletcher, C. (2004). *The Complete Walker IV*. New York, NY: Alfred A. Knopf.
- c. C2-012 (ISBN 0-89886-643-X) Weiss, H. (1988). *Secrets of Warmth for Comfort or Survival*. Seattle, WA: The Mountaineers.
- d. C2-017 (ISBN 0-7627-0476-4) Roberts, H. (1999). *Basic Essentials, Backpacking*. Guilford, CT: The Globe Pequot Press.

8. **Training Aids:** N/A.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** Examples of hiking footwear should be brought into the class for demonstration purposes.

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**EO M290.06 – OPERATE A HAND-HELD RADIO**

1. **Performance:** Operate a Hand-Held Radio
2. **Conditions:**
  - a. Given:
    - (1) Hand-held radio per four cadets;
    - (2) Batteries;
    - (3) Assigned network frequencies;
    - (4) Supervision; and
    - (5) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Field setting, day or night, during a field exercise.
3. **Standard:** In accordance with *Talkabout FRS/GMRS Recreational Two-way Radios Models T5000, T5500, T5550 User's Guide*, the cadet shall operate a hand-held radio, to include:
  - a. turning the radio on and off;
  - b. adjusting frequencies;
  - c. using the push-to-talk button; and
  - d. changing the batteries.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                   | Method                        | Time  | Refs               |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------|--------------------|
| TP1 | Identify and briefly describe the parts of the radio, to include: <ol style="list-style-type: none"> <li>a. on-off/volume knob;</li> <li>b. light emitting diode (LED);</li> <li>c. push-to-talk button (PTT);</li> <li>d. speaker;</li> <li>e. antenna;</li> <li>f. accessory jack;</li> <li>g. menu scroll/channel/frequency selector;</li> <li>h. microphone;</li> <li>i. battery cover; and</li> <li>j. battery cover latches.</li> </ol> | Interactive Lecture           | 5 min | C0-069 (pp. 11–12) |
| TP2 | Demonstrate and have cadets turn the radio on and off.                                                                                                                                                                                                                                                                                                                                                                                        | Demonstration and Performance | 5 min | C0-069 (p. 15)     |
| TP3 | Demonstrate adjusting frequencies.                                                                                                                                                                                                                                                                                                                                                                                                            | Demonstration                 | 5 min | C0-069 (p. 16)     |

| TP  | Description                                                                                                                                                                                                                                              | Method                        | Time  | Refs                                        |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------|---------------------------------------------|
| TP4 | Demonstrate and allow cadets to practice operating the push-to-talk button, to include:<br>a. depressing the button;<br>b. observing a standard pause;<br>c. speaking loudly, clearly, and briefly; and<br>d. releasing the button.                      | Demonstration and Performance | 5 min | C0-069 (pp. 17–18)                          |
| TP5 | Demonstrate and allow cadets to practice changing batteries, to include:<br>a. removing the battery compartment cover;<br>b. replacing/installing batteries;<br>c. replacing the battery compartment cover; and<br>d. safely discarding spent batteries. | Demonstration and Performance | 5 min | C0-069 (pp. 13–14)<br>See Remarks Para 11b. |

5. **Time:**

- |                                   |        |
|-----------------------------------|--------|
| a. Introduction / Conclusion:     | 5 min  |
| b. Interactive Lecture:           | 5 min  |
| c. Demonstration:                 | 5 min  |
| d. Demonstration and Performance: | 15 min |
| e. Total:                         | 30 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 to introduce a new subject and give direction on new procedures.
- Demonstration and performance was chosen for TP2, TP4, and TP5 as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.
- Demonstration was chosen for TP3 as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire.

7. **References:** C0-069 Motorola Inc. (2004). *Talkabout FRS/GMRS Recreational Two-way Radios Models T5000, T5500, T5550 User's Guide*. Motorola Inc.8. **Training Aids:**

- Hand-held radio; and
- Batteries.

9. **Learning Aids:**

- One hand-held radio per four cadets; and
- Batteries.

10. **Test Details:** N/A.

11. **Remarks:**

- a. Hand-held radio models may vary from region to region. The instructor will be responsible for consulting the owner's manual for detailed instructions on radio operation.
- b. Dispose/recycle the batteries in accordance with local regulations.

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## EO C290.01 – PARTICIPATE IN A PRESENTATION GIVEN BY A MEMBER OF A SURVIVAL ORGANIZATION

1. **Performance:** Participate in a Presentation Given by a Member of a Survival Organization
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable classroom facilities or training area large enough to accommodate the entire group.
3. **Standard:** The cadet shall participate in a presentation given by a member of a survival organization to further develop the cadet's knowledge of survival training.
4. **Teaching Points:** The guest speaker is asked to:
  - a. describe the service agency of which they are a member;
  - b. describe their duties;
  - c. describe a day in the life of a member of a survival organization;
  - d. explain their role in the community; and
  - e. facilitate a question and answer period.
5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 5 min  |
| b. Interactive Lecture:       | 55 min |
| c. Total:                     | 60 min |
6. **Substantiation:** The interactive lecture was chosen for this lesson to orient the cadets to the topic and generate an interest in survival.
7. **References:** N/A.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/ presentation area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:**
  - a. Training aids should be determined by contacting the speaker prior to the presentation.
  - b. There is no instructional guide for this EO.

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**EO C290.02 – DISCUSS SKINNING AND COOKING A SMALL ANIMAL**

1. **Performance:** Discuss Skinning and Cooking a Small Animal
2. **Conditions:**
  - a. Given:
    - (1) Supervision; and
    - (2) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Suitable indoor or outdoor training area large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references, the cadet shall discuss skinning and cooking a small animal.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                           | Method              | Time   | Refs                                    |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-----------------------------------------|
| TP1 | Discuss skinning a small animal, to include: <ol style="list-style-type: none"> <li>a. removing urine;</li> <li>b. cutting a hole in the belly area;</li> <li>c. pulling the skin apart and removing the guts;</li> <li>d. cutting the skin around the front and hind paws;</li> <li>e. hanging the animal; and</li> <li>f. removing the skin and dismembering the animal.</li> </ol> | Interactive Lecture | 15 min | C3-003 (p. 146)                         |
| TP2 | Discuss cooking a small animal, to include: <ol style="list-style-type: none"> <li>a. boiling;</li> <li>b. baking;</li> <li>c. grilling;</li> <li>d. roasting;</li> <li>e. steaming; and</li> <li>f. frying.</li> </ol>                                                                                                                                                               | Interactive Lecture | 10 min | C2-002 (pp. 283–286)<br>C3-003 (p. 146) |

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 25 min
  - c. Total: 30 min

6. **Substantiation:** An interactive lecture was chosen for this lesson to present basic material.
7. **References:**
  - a. C3-002 (ISBN 0-00-653140-7) Wiseman, J. (1999). *The SAS Survival Handbook*. Hammersmith, London: HarperCollinsPublishers.
  - b. C3-003 1-896713-00-9 Tawrell, P. (1996). *Camping and Wilderness Survival: The Ultimate Outdoors Book*. Green Valley, ON: Falcon Distribution.
8. **Training Aids:** Presentation aids (e.g. whiteboard/flipchart/OHP) appropriate for the classroom/ presentation area.
9. **Learning Aids:** N/A.
10. **Test Details:** N/A.
11. **Remarks:** N/A.

**EO C290.03 – CONSTRUCT A SNOW CAVE**

1. **Performance:** Construct a Snow Cave
2. **Conditions:**
  - a. Given:
    - (1) Shovel;
    - (2) Groundsheet;
    - (3) Supervision; and
    - (4) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Winter field setting during the day large enough to accommodate the entire group and the shelter construction.
3. **Standard:** In accordance with specified references and as a member of a group of no more than four, the cadet shall construct a snow cave by:
  - a. selecting a site;
  - b. constructing the snow cave; and
  - c. disassembling the snow cave when the exercise is completed.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                | Method              | Time  | Refs                               |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|------------------------------------|
| TP1 | Identify factors to consider in selecting a site for a snow cave, to include: <ol style="list-style-type: none"> <li>a. a hard snow drift; or</li> <li>b. a slope with a firm crust of snow on the opposite side of the wind; and</li> <li>c. avoiding a drift that is below a cornice or in an avalanche area.</li> </ol> | Interactive Lecture | 5 min | C3-002 (p. 256)<br>C3-003 (p. 117) |

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Method        | Time   | Refs                               |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|------------------------------------|
| TP2 | <p>Demonstrate appropriate site selection and construct a snow cave, to include:</p> <ul style="list-style-type: none"> <li>a. burrowing a small tunnel that is one metre into the lowest level of the chamber;</li> <li>b. clearing the chamber of snow at right angles to the tunnel;</li> <li>c. clearing the chamber of snow to a height comfortable for sitting;</li> <li>d. constructing the outside of the roof to be well arched without sharp angles, to provide maximum support;</li> <li>e. constructing a sleeping and sitting platform above the level of the entrance;</li> <li>f. constructing a breathing hole in the roof of the snow cave; and</li> <li>g. constructing a door using a block of snow or a groundsheet.</li> </ul> <p><b>Note:</b> Ensure cadets enter and observe the finished snow cave.</p> | Demonstration | 35 min | C3-002 (p. 256)<br>C3-003 (p. 117) |
| TP3 | Ensure cadets choose an appropriate site for construction of a snow cave and have cadets construct a snow cave following the directions in TP1 and TP2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Performance   | 35 min |                                    |
| TP4 | Disassemble the snow caves when the exercise is completed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Performance   | 5 min  |                                    |

5. **Time:**

|                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. Interactive Lecture:       | 5 min  |
| c. Demonstration:             | 35 min |
| d. Performance:               | 40 min |
| e. Total:                     | 90 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to present basic material and give direction on procedures.
- b. Demonstration was chosen TP2 as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire.
- c. Performance was chosen TP3 and TP4 as it provides an opportunity for the cadets to practice building a snow cave under supervision.

7. **References:**

- a. C3-002 (ISBN 0-00-653140-7) Wiseman, J. (1999). *The SAS Survival Handbook*. Hammersmith, London: HarperCollinsPublishers.
- b. C3-003 1-896713-00-9 Tawrell, P. (1996). *Camping and Wilderness Survival: The Ultimate Outdoors Book*. Green Valley, ON: Falcon Distribution.

8. **Training Aids:** N/A.

9. **Learning Aids:**

- a. Shovel; and
- b. Groundsheet.

10. **Test Details:** N/A.

11. **Remarks:**

- a. Cadets will not sleep in the snow cave.
- b. Additional supervision is required during the construction of the snow cave.

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**EO C290.04 – COLLECT DRINKING WATER USING A SOLAR STILL**

1. **Performance:** Collect Drinking Water Using a Solar Still
2. **Conditions:**
  - a. Given:
    - (1) Clear plastic bags;
    - (2) Cup or pail;
    - (3) Shovel;
    - (4) Supervision; and
    - (5) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Field setting during the day large enough to accommodate the entire group.
3. **Standard:** In accordance with specified references and as a member of a group of no more than five, the cadet shall collect drinking water using a solar still by:
  - a. selecting an appropriate site;
  - b. constructing the solar still;
  - c. collecting water (as time allows); and
  - d. disassembling the solar still.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                    | Method              | Time   | Refs                              |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-----------------------------------|
| TP1 | Explain how to find an appropriate collection site by digging a hole in the ground.                                                                                                                                                                                                                                                                                                                                                            | Interactive Lecture | 5 min  |                                   |
| TP2 | Demonstrate the construction of a solar still, to include: <ol style="list-style-type: none"> <li>a. digging a hole;</li> <li>b. placing a collecting can in the centre of the hole;</li> <li>c. covering the hole with a sheet of plastic formed into a cone;</li> <li>d. weighing down the edges of the plastic sheet; and</li> <li>e. placing a stone in the centre of the bottom of the plastic sheet above the collecting can.</li> </ol> | Demonstration       | 15 min | C3-002 (p. 42)<br>C3-003 (p. 151) |
| TP3 | Explain how water condensation from the ground, to the underside of the plastic sheet, to the collecting can works.                                                                                                                                                                                                                                                                                                                            | Interactive Lecture | 5 min  | C3-002 (p. 42)<br>C3-003 (p. 151) |

| TP  | Description                                                                                                                                   | Method      | Time   | Refs |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|------|
| TP4 | Have the cadets in groups of no more than five construct a solar still.<br><br><b>Note:</b> The stills can remain overnight to collect water. | Performance | 25 min |      |
| TP5 | Disassemble the solar still and fill in the hole.                                                                                             | Performance | 5 min  |      |

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 10 min |
| c. | Demonstration:             | 15 min |
| d. | Performance:               | 30 min |
| e. | Total:                     | 60 min |

6. **Substantiation:**

- An interactive lecture was chosen for TP1 and TP3 to present basic material and give direction on procedures.
- Demonstration was chosen for TP2 as it allows the instructor to explain and demonstrate building a solar still.
- Performance was chosen for TP4 and TP5 as it provides an opportunity for the cadets to practice the skill under supervision.

7. **References:**

- C3-002 (ISBN 0-00-653140-7) Wiseman, J. (1999). *The SAS Survival Handbook*. Hammersmith, London: HarperCollinsPublishers.
- C3-003 (ISBN 1-896713-00-9) Tawrell, P. (1996). *Camping and Wilderness Survival: The Ultimate Outdoors Book*. Green Valley, ON: Falcon Distribution.

8. **Training Aids:**

- Clear plastic bags;
- Cup or pail; and
- Shovel.

9. **Learning Aids:**

- Clear plastic bags;
- Cup or pail; and
- Shovel.

10. **Test Details:** N/A.
11. **Remarks:** The solar still must remain in place overnight as both the heat from the sun and the cool air at night are required for the water condensation process to occur. For scheduling purposes, TP1 to TP4 will be done on day one of the schedule and TP5 will occur on day two.

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**EO C290.05 – PARTICIPATE IN A HIKE**

1. **Performance:** Participate in a Hike
2. **Conditions:**
  - a. Given:
    - (1) A planned hike of no greater than 3 km in length;
    - (2) Water supply;
    - (3) Whistle;
    - (4) Supervision; and
    - (5) Assistance as required.
  - b. Denied: N/A.
  - c. Environmental: Field setting with Class 1 hiking terrain, during daylight hours.
3. **Standard:** In accordance with A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Standards*, the cadet shall participate in a 3 km hike by:
  - a. utilizing proper trail etiquette methods;
  - b. demonstrating proper trailblazing techniques; and
  - c. following a leader.
4. **Teaching Points:**

| TP  | Description                                                                                                                                                                                                                                                                                                                                                                                                                | Method                        | Time   | Refs               |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------|--------------------|
| TP1 | Describe trail etiquette methods that accomplish the leave no trace ideologies while hiking, to include: <ol style="list-style-type: none"> <li>a. identifying trail etiquette; and</li> <li>b. wearing proper safety equipment, to include:               <ol style="list-style-type: none"> <li>(1) a whistle;</li> <li>(2) a hat;</li> <li>(3) sunscreen; and</li> <li>(4) appropriate footwear.</li> </ol> </li> </ol> | Interactive Lecture           | 10 min |                    |
| TP2 | Demonstrate and have the cadets practice trailblazing techniques.                                                                                                                                                                                                                                                                                                                                                          | Demonstration and Performance | 60 min | A2-001 (p. 7–1/14) |
| TP3 | Conduct a group discussion and debrief the cadets on their experiences while on the hike.                                                                                                                                                                                                                                                                                                                                  | Group Discussion              | 15 min |                    |

5. **Time:**

|    |                                |        |
|----|--------------------------------|--------|
| a. | Introduction / Conclusion:     | 5 min  |
| b. | Interactive Lecture:           | 10 min |
| c. | Demonstration and Performance: | 60 min |
| d. | Group Discussion:              | 15 min |
| e. | Total:                         | 90 min |

6. **Substantiation:**

- a. An interactive lecture was chosen for TP1 to give directions on procedures for the hike.
- b. Demonstration and performance was chosen for TP2 as it is an interactive way to allow cadets to experience hiking in a safe, controlled environment. This activity contributes to the development of the cadets' hiking skills and knowledge in a fun and challenging setting.
- c. A group discussion was chosen for TP3 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions and feelings about the hike.

7. **References:** A2-001 A-CR-CCP-951/PT-002 D Cds 3. (2006). *Royal Canadian Army Cadets Adventure Training Standards*. Ottawa, ON: Department of National Defence.

8. **Training Aids:** N/A.

9. **Learning Aids:** Flagging tape.

10. **Test Details:** N/A.

11. **Remarks:** A whistle will be carried by every cadet as a safety precaution.

## INSTRUCTIONAL METHODOLOGIES AND THEIR APPLICATIONS

The various methods of instruction commonly accepted as appropriate for cadet training is outlined below.

| <b>Method</b>                 | <b>Developmental Period One<br/>Ages 12–14 Experience-Based</b> | <b>Developmental Period Two<br/>Ages 15–16 Developmental</b> | <b>Developmental Period Three<br/>Ages 17–18 Competency</b> |
|-------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|
| Case Study                    | N/A                                                             | Applicable                                                   | Applicable                                                  |
| Demonstration and Performance | Applicable                                                      | Applicable                                                   | Applicable                                                  |
| Experiential Learning         | Applicable                                                      | Applicable                                                   | Applicable                                                  |
| Field Trip                    | Applicable                                                      | Applicable                                                   | Applicable                                                  |
| Game-playing                  | Applicable                                                      | Applicable                                                   | Applicable                                                  |
| Group Discussion              | Applicable                                                      | Applicable                                                   | Applicable                                                  |
| Guided Discussion             | N/A                                                             | N/A                                                          | Applicable                                                  |
| In-Class Activity             | Applicable                                                      | Applicable                                                   | Applicable                                                  |
| Interactive Lecture           | Applicable                                                      | Applicable                                                   | Applicable                                                  |
| Lecture                       | Applicable                                                      | Applicable                                                   | Applicable                                                  |
| On-the-Job Training (OJT)     | N/A                                                             | N/A                                                          | Applicable                                                  |
| Peer Learning                 | N/A                                                             | N/A                                                          | Applicable                                                  |
| Practical Activity            | Applicable                                                      | Applicable                                                   | Applicable                                                  |
| Role-play                     | N/A                                                             | Applicable                                                   | Applicable                                                  |
| Self-study                    | N/A                                                             | N/A                                                          | Applicable                                                  |
| Simulation                    | N/A                                                             | N/A                                                          | Applicable                                                  |
| Tutorial                      | N/A                                                             | N/A                                                          | Applicable                                                  |

General information follows on each method for its age-appropriateness, definition, application, advantages and disadvantages.

| Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Advantages                                                                                                                                                                                                                                                                                                                                                                                                     | Disadvantages                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>DEMONSTRATION AND PERFORMANCE</b></p> <p>Cadets observe the instructor performing the task in a demonstration, and rehearse it under the supervision of the instructor.</p> <p><b>Demonstration Method</b></p> <p>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.</p> <p><b>Performance Method</b></p> <p>A method in which the cadet is required to perform, under controlled conditions, the operations, skill or movement being taught.</p> | <p><b>Demonstration Method</b></p> <ol style="list-style-type: none"> <li>1. To teach hands-on operations or procedures.</li> <li>2. To teach troubleshooting.</li> <li>3. To illustrate principles.</li> <li>4. To teach operation or functioning of equipment.</li> <li>5. To set standards of workmanship.</li> <li>6. To teach safety procedures.</li> </ol> <p><b>Performance Method</b></p> <ol style="list-style-type: none"> <li>1. To teach hands-on operations or procedures.</li> <li>2. To teach operations or functioning of equipment.</li> <li>3. To teach team skills.</li> <li>4. To teach safety procedures.</li> </ol> | <p><b>Demonstration Method</b></p> <ol style="list-style-type: none"> <li>1. Minimizes damage and waste.</li> <li>2. Saves time.</li> <li>3. Can be presented to large groups.</li> </ol> <p><b>Performance Method</b></p> <ol style="list-style-type: none"> <li>1. Builds confidence.</li> <li>2. Enables learning evaluation.</li> <li>3. Reduces damage and waste.</li> <li>4. Promotes safety.</li> </ol> | <p><b>Demonstration Method</b></p> <ol style="list-style-type: none"> <li>1. Requires careful preparation and rehearsal.</li> <li>2. Requires special classroom arrangements.</li> <li>3. Requires equipment and aids.</li> </ol> <p><b>Performance Method</b></p> <ol style="list-style-type: none"> <li>1. Requires tools and equipment.</li> <li>2. Requires large blocks of time.</li> <li>3. Requires more instructors.</li> </ol> |

| Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Applications                                                                                                                                                                                                                                    | Advantages                                                                                                                                                                                                                                                                        | Disadvantages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <p><b>EXPERIENTIAL LEARNING</b></p> <p>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.</p> <p><b>Stage 1: Concrete Experience:</b> Cadets have an experience and take time to identify and define what the experience is. Sample activities: direct observations, simulations, field trips, and reading.</p> <p><b>Stage 2: Reflective Observation:</b> 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.</p> <p><b>Stage 3: Abstract Conceptualization:</b> Cadets work to understand and make connections from the experience to new or different situations. Sample activities: interview, discussion, model building, analogies and planning.</p> <p><b>Stage 4: Active Experimentation:</b> Cadets look ahead to and plan the application of skills and knowledge acquired to future experience. Sample activities include: simulation, fieldwork.</p> <p><b>Note:</b> The cycle is ongoing as each learning experience builds on another.</p> | <ol style="list-style-type: none"> <li>1. To teach practical skills.</li> <li>2. To learn how to learn.</li> <li>3. To teach transferable skills.</li> <li>4. To teach a process or principle.</li> <li>5. To teach problem solving.</li> </ol> | <ol style="list-style-type: none"> <li>1. Knowledge is shared and created by collectively by all participants.</li> <li>2. Everyone is actively involved in the teaching – learning process.</li> <li>3. Appeals to many learning styles.</li> <li>4. Student centred.</li> </ol> | <ol style="list-style-type: none"> <li>1. Resource intensive.</li> <li>2. Requires significant planning, preparation and organization prior to activity.</li> <li>3. The instructor must master the subject developed.</li> <li>4. Instructor needs very good pedagogical skills.</li> <li>5. May not be a good process for learning details.</li> <li>6. The instructor must be a good facilitator to carry out an effective reflective session in stage 2 and 3 of this method.</li> </ol> |
| <p><b>FIELD TRIP</b></p> <p>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, hiking or sailing.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <ol style="list-style-type: none"> <li>1. To introduce/illustrate and confirm topics.</li> <li>2. To allow for familiarization activities.</li> </ol>                                                                                           | <ol style="list-style-type: none"> <li>1. Immerses cadets in a specific environment.</li> </ol>                                                                                                                                                                                   | <ol style="list-style-type: none"> <li>1. May require additional staff to ensure adequate supervision.</li> <li>2. Requires significant planning, preparation and organization prior to activity.</li> <li>3. May have cost implications.</li> </ol>                                                                                                                                                                                                                                         |

| Method(s)                                                                                                                                                                                                                                                                                                         | Applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Advantages                                                                                                                                                                                                                                     | Disadvantages                                                                                                                            |
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| <b>GAME-PLAYING</b><br><br>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.                      | 1. To introduce a topic.<br>2. To discover concepts and principles.<br>3. To review and confirm.                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1. Fun and interesting.<br>2. Creates ownership.<br>3. Highly participative.                                                                                                                                                                   | 1. May stratify the group by creating a winner and a loser.<br>2. May be difficult in providing instructor feedback.                     |
| <b>GROUP DISCUSSION</b><br><br>Cadets discuss issues, share knowledge, opinions and feelings about a topic in small groups to meet a specified 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.<br>2. To stimulate thinking and interest and to secure cadet participation.<br>3. To emphasize main teaching points.<br>4. To supplement lectures and seminars.<br>5. To determine how well cadets understand the concepts and principles.<br>6. To prepare cadets for application of theory or procedure.<br>7. To summarize, clarify points or review.<br>8. To prepare cadets for instruction that will follow.<br>9. To determine cadet progress and effectiveness of prior instruction. | 1. Increases cadet interest.<br>2. Increases cadet acceptance and commitment.<br>3. Utilizes cadet knowledge and experience.<br>4. Results in more permanent learning because of the high degree of cadet participation/cognitive involvement. | 1. Requires highly skilled instructors.<br>2. Time consuming.<br>3. Restricts size of group.<br>4. Requires selective group composition. |

| Method(s)                                                                                                                                                                                                                                                                                                                                                      | Applications                                                                                                                                                                                                                          | Advantages                                                                                                                                                    | Disadvantages                                                                               |
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| <b>IN-CLASS ACTIVITY</b><br><br>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. | 1. To reinforce instructional topics.<br>2. To orient cadets to the subject.<br>3. To give direction on procedures.<br>4. To illustrate the application of rules, principles or concepts.<br>5. To review, clarify, and/or summarize. | 1. Provokes thought and stimulates interest among cadets.<br>2. Appeals to kinaesthetic learners                                                              | 1. Difficult to gauge cadet reaction.<br>2. Takes time to prepare.                          |
| <b>INTERACTIVE LECTURE</b><br><br>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.<br>2. To give instruction on procedures.<br>3. To illustrate the application of rules, principles or concepts.<br>4. To review, clarify, and/or summarize.                                        | 1. Saves time.<br>2. Permits flexibility of class size.<br>3. Requires less rigid space requirements.<br>4. Permits better control over content and sequence. | 1. Difficult to gauge cadet reaction.                                                       |
| <b>LECTURE</b><br><br>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.<br>2. To give instruction on procedures.<br>3. To illustrate the application of rules, principles or concepts.<br>4. To review, clarify, and/or summarize.                                        | 1. Proficient oral skills are required.<br>2. Useful for big groups.<br>3. Saves time because of fewer interruptions.                                         | 1. Requires preparation and a dynamic lecturer.<br>2. Cadets may be passive and uninvolved. |

| Method(s)                                                                                                                                                                                                                                                                                                                                                                                    | Applications                                                                           | Advantages                                                                                                                    | Disadvantages                                                                                                                      |
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| <b>PRACTICAL ACTIVITY</b><br><br>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. To introduce a subject.<br>2. To practice skills.<br>3. To review and/or reinforce. | 1. Encourages participation.<br>2. Stimulates an interest in the subject.<br>3. Fun and interesting.<br>4. Creates ownership. | 1. Requires significant planning, preparation and organization.<br>2. May require additional staff to ensure adequate supervision. |