

CHAPTER 10

**PO 121 – PARTICIPATE IN CANADIAN AVIATION, AEROSPACE AND
AERODROME OPERATIONS COMMUNITY FAMILIARIZATION ACTIVITIES**



ROYAL CANADIAN AIR CADETS

LEVEL ONE

INSTRUCTIONAL GUIDE



EO M121.01 – DISCUSS AVIATION OPPORTUNITIES

Total Time:

30 min

INTRODUCTION

PRE-LESSON INSTRUCTIONS

A complete list of resources needed for the instruction of this EO is located at Chapter 2 of the QSP. Specific uses for said stores are identified throughout the Instructional Guide, within the teaching point for which they are required.

Prior to instructing this lesson the instructor shall:

- review the lesson content, and become familiar with the material;
- prepare career investigation sheets as outlined in the activity; and
- prepare career information envelopes as outlined in the activity.

PRE-LESSON ASSIGNMENT

N/A.

APPROACH

The small group activity was selected to allow for maximum participation in the learning process. It is an interactive way to illustrate and substantiate the lesson material in a concrete manner.

The group discussion method was chosen to allow the 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.

REVIEW

N/A.

OBJECTIVES

By the end of this lesson the cadet shall be expected to have gained some basic knowledge of aviation careers, to include:

- pilots and flying instructors;
- air traffic controllers and flight service specialists;
- aircraft maintenance engineers;
- air transport ramp attendants;

- aerodrome managers; and
- aerospace engineers and aircraft assemblers.

For each career, the following shall be discussed:

- job description;
- employers;
- related Performance Objectives (POs); and
- related summer training courses.

IMPORTANCE

There are many career opportunities available in the aviation industry. Identifying possible opportunities in the aviation community can stimulate interests in the different aspects of the Cadet Program. Highlighting the link between cadet training and different career paths can increase the relevancy of cadet training. Knowledge of aviation opportunities can stimulate an interest in different aspects of the civilian and military aviation communities.

BACKGROUND KNOWLEDGE

PILOTS AND FLIGHT INSTRUCTORS

Pilots fly airplanes and helicopters to provide air transportation, training, and surveying services. Flying instructors teach flying techniques and procedures to student and licensed pilots.

Pilots and flight instructors are employed by airlines, airfreight companies, flying schools, the Canadian Forces (CF), and other public and private sector aircraft operators.

Topics such as aerodrome operations, aircraft maintenance, radio, theory of flight, navigation and meteorology will assist cadets in preparing for pilot training.

Cadet summer training courses include a three-week introduction to an aviation course, a three-week advanced aviation course and gliding and power flying scholarship courses.

AIR TRAFFIC CONTROLLERS AND FLIGHT SERVICE SPECIALISTS

Air traffic controllers use radio communication to direct air traffic within assigned airspace. Also, they control aircraft and vehicle movement at airports. Flight service specialists provide pilots with flight information essential to aviation safety, such as weather conditions.

Air traffic controllers and flight service specialists are employed by NAV Canada and the CF.

Topics such as radio communication, aerodrome operations and air traffic control will assist cadets in preparing for air traffic control training.

Cadet summer training courses include a three-week introduction to an aviation technology course and a six-week advanced aviation technology course – airport operations.

AIRCRAFT MAINTENANCE ENGINEERS (AME)

Aircraft maintenance engineers maintain, repair, overhaul, modify and test aircraft structures and systems. The aircraft systems they work on include mechanical, hydraulic, instrument, electrical and avionics.

Aircraft manufacturing, maintenance, repair companies, airlines, the CF and other aircraft operators employ AMEs.

Topics such as aircraft maintenance will assist cadets in preparing for AME training.

Cadet summer training courses include a three-week introduction to an aviation technology course and a six-week advanced aviation technology course – aircraft maintenance.

AIR TRANSPORT RAMP ATTENDANTS

Air transport ramp attendants operate ramp-servicing vehicles and equipment, handle cargo and baggage, and perform other ground support duties.

They are employed by airlines, air services companies and the federal government.

Topics such as aerodrome operations and radio will assist cadets in preparing for groundside careers.

Cadets summer training courses include a three-week introduction to an aviation technology course and a six-week advanced aviation technology course - aerodrome operations.

AERODROME MANAGERS

Aerodrome managers plan, organize, direct, control and evaluate the operations of an aerodrome. Some areas of responsibility may include marketing, budgeting, human resources, and managing the buildings and the land.

Aerodrome managers work for airport authorities, local governments or private airports.

Topics such as aerodrome operations and leadership will assist cadets in preparing for aerodrome management careers.

Cadets summer training courses include a three-week introduction to an aviation technology course and a six-week advanced aviation technology course - aerodrome operations.

AEROSPACE ENGINEERS AND AIRCRAFT ASSEMBLERS

Aerospace engineers research, design, and develop aerospace vehicles, aerospace systems and their components. They also perform duties related to testing, evaluation, installation, operation and maintenance of the same.

Aircraft and spacecraft manufacturers, air transport carriers and research institutions employ aerospace engineers.

Aircraft assemblers assemble, fit and install prefabricated parts to manufacture fixed wing aircraft, rotary wing aircraft or aircraft components.

Aircraft subassembly manufacturers employ aircraft assemblers. Subassembly companies assemble the different sections of aircraft like the landing gear.

Topics such as theory of flight, aircraft maintenance and aerospace will assist cadets in preparing for design and assembly training.

Cadet summer training courses include a three-week introduction to aviation technology course and a six-week advanced aviation technology course – aircraft maintenance.

ACTIVITY

Time: 12 min

OBJECTIVE

This activity is designed make cadets think about what is involved in different aviation careers, and how cadet training relates to these careers.

RESOURCES

- One career investigation sheet per group.
- One set of career information envelopes per group, to include:
 - job descriptions envelope;
 - employers envelope;
 - PO envelope; and
 - summer training courses envelope.

ACTIVITY LAYOUT

1. Prepare career information envelopes prior to the lesson. The information in the envelopes should be on individual pieces of paper.
2. Divide the cadets into six groups. Assign each group an aviation career from the following list:
 - pilots and flying instructors;
 - air traffic controllers and flight service specialists;
 - aircraft maintenance engineers;
 - air transport ramp attendants;
 - aerodrome managers; and
 - aerospace engineers and aircraft assemblers.



If there are less than 12 cadets in the class, divide them into three groups and assign each group two careers.

3. Give each group a career investigation sheet and set of career information envelopes. Advise each group that they will present their career to the class at the end of their investigation.
4. Have the groups open their job description envelopes. Cadets will have two minutes to:
 - read through all of the descriptions;
 - select the job description statements that match their careers; and

- record the descriptions on their career investigation sheets.
5. Have the groups open their employer envelopes. Cadets will have two minutes to:
 - read through all of the employers;
 - select the employers that someone from their career might work for. There may be many possible answers for each career;
 - record the employers on their career investigation sheets; and
 - make a sensible case for the employers they have selected.
 6. Have the groups open their PO envelopes. Cadets will have one minute to:
 - read through all of the POs;
 - select the POs that will help them prepare for their career; and
 - record these POs on their career investigation sheets.
 7. Have the groups open their summer courses envelopes. Cadets will have one minute to:
 - read through all of the summer training courses;
 - select the summer courses that will help them prepare for their career; and
 - record these summer courses on their career investigation sheets.

SAFETY

N/A.

INSTRUCTOR GUIDELINES

- Circulate among the groups to supervise and assist as necessary.
- Answer questions the cadets have about the activity and the content.
- Ensure all cadets are participating in the small group discussions to select the material.
- Keep track of and announce timings for the whole group.
- Ensure cadets are moving to the next envelope when the timings are called.
- Correct errors that groups may make during the activity.
- Offer encouragement and confirm success as groups progress through their investigations.

REFLECTION

Time: 13 min

GROUP PRESENTATIONS

Randomly select groups to present their careers. The instructor will confirm their information and make any additions or comments as necessary. Each group should have one to two minutes to present.

DISCUSSION QUESTIONS



TIPS FOR ANSWERING/FACILITATING DISCUSSION

- Ask questions that help facilitate discussion; in other words, avoid questions with yes or no answers.
- Prepare questions ahead of time.
- Be flexible (you are not bound to only the prepared questions).
- Encourage cadets to participate by using praise such as “great idea” or “excellent response, can anyone add to that?”
- Try to involve everyone by directing questions to non-participants.

SUGGESTED QUESTIONS

- Q1. What career are you most interested in, and why?
- Q2. Does anyone know someone that works in one of these careers? What can you tell us about their job?
- Q3. How will Air Cadet training assist in preparing for these careers?

CONCLUSION

HOMEWORK/READING/PRACTICE

N/A.

METHOD OF EVALUATION

There is no formal assessment of this lesson.

CLOSING STATEMENT

As cadets are exposed to more aviation-related information, they should think about the range of careers that are available to them. Every person involved in aviation has an important role to play, and all of them are critical for the safe and efficient operation of aircraft. Cadets may encounter people that work in these careers during tours. Further aviation-related classes can be associated with many of the careers discussed.

INSTRUCTOR NOTES/REMARKS

N/A.

REFERENCES

- A3-002 CATO 54-10, Cadets Canada. (1995). CATO 54-10, *Local Headquarters Training: Air cadets*. In Cadet Administrative and Training Orders (Vol. 5, 4 pages). Ottawa, ON.
- A3-003 CATO 54-20, Cadets Canada. (2000). CATO 54-20, *Summer Training Directive: Royal Canadian Air Cadets*. In Cadet Administrative and Training Orders (Vol. 5, 4 pages). Ottawa, ON.
- C3-001 *National Occupation Classification 2001 (NOC2001)*. (2001). Retrieved 23 March 2006, from <http://www.hrhc.drhc.gc.ca/2001/e/generic/welcome.shtml>.

CAREER INVESTIGATION SHEET

TEAM MEMBERS: _____

CAREER: _____

JOB DESCRIPTION: _____

EMPLOYERS: _____

RELATED POs _____

RELATED SUMMER TRAINING _____

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CAREER INFORMATION ENVELOPES

Job Descriptions	
Fly airplanes and helicopters to provide air transportation, training, and surveying services.	Teach flying techniques and procedures to students and licensed pilots.
Direct air traffic within assigned airspace, and control moving aircraft and service vehicles at airports.	Provide pilots with flight information essential to aviation safety.
Maintain, repair, and test aircraft structures and systems.	Drive ramp equipment, handle cargo and baggage, and do other ground support jobs at airports.
Manage the operations of an aerodrome, including the people, the money, the buildings, and the land.	Design aerospace vehicles and systems.
Put together and install pre-made parts to make airplanes and helicopters.	

Employers				
Airlines	Air cargo companies	Canadian Forces	Private companies	Flying schools
NavCanada – runs all the air traffic control services in Canada	Aircraft manufacturing companies	Aircraft maintenance companies	Ground support companies	Airport management authorities
Local governments	Private airports	Aircraft and spacecraft manufacturers	Research institutions	Aircraft part manufacturers

POs				
Theory of flight	Navigation	Meteorology	Radio	Aerodrome operations
Aircraft maintenance	Air traffic control	Leadership	Aerospace	

Summer Courses				
Introduction to Aviation	Gliding Scholarship	Power Scholarship	Air Traffic Control Scholarship	Aircraft Maintenance Scholarship
Aerodrome Operations Scholarship	Introduction to Leadership	Introduction to Aerospace	Aerospace Scholarship	

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