ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M190.01 – PACK PERSONAL EQUIPMENT FOR AN AIRCREW SURVIVAL EXERCISE

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare a properly packed rucksack or backpack IAW the principles outlined in this lesson.

Ensure the rucksack or backpack includes all of the materials discussed in this lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture method was chosen for TP 1 to orient the cadets on how to select field clothing and generate an interest in the subject.

A demonstration and performance method was chosen for TP 2 as it allows the instructor to explain and demonstrate packing personal equipment skills the cadet is expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to select and pack appropriate personal equipment for field training.

IMPORTANCE

Selecting and packing the appropriate clothing is a key element of field training. Weather can be a large factor in a survival situation. Selecting the right clothing can help prevent unnecessary injury and weather-related illnesses. Improper packing techniques can cause discomfort and possible injury.

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Teaching point 1 **Explain how to select field clothing.**

Time: 30 min Method: Interactive Lecture

THE LAYERING PRINCIPLE

The Core Layer (Upper Body)

This layer lies next to the skin. It should consist of a wool or synthetic undershirt or a long-sleeved thermal top. The garment should be close fitting but not tight. It should be made of a material that absorbs perspiration and moves it away from the skin. This layer must be kept as clean as possible to prevent dirt from clogging the pores of the fabric.

The Second Layer

The second layer should be loose fitting and should keep the blood vessels of the neck and wrists protected and warm. It could consist of a zip-up top with a high neck or a shirt with a collar. Sleeves should be able to be rolled up and cuffs should be able to be buttoned. In hot weather, this layer may be used as an outer layer.

The Outer Layer

The outer layer should be a jacket that is both wind resistant and waterproof depending on the climate. For example, in the Arctic, a padded, windproof parka is required for protection against cutting winds and extreme cold. It must be able to vent to avoid overheating. In temperate areas, rain is the most common cause of cold or discomfort. Waterproof outerwear should be worn.

Underwear (Lower Body)

Long thermal underwear is only necessary in temperatures below freezing. In the Arctic a “groin patch” of impermeable material prevents wind chill in that area. If underwear gets wet, it eventually dries. However, this problem can be avoided by wearing waterproof pants. In mild weather this layer may consist of cotton shorts.

PANTS

Pants should allow freedom of movement and should be able to dry quickly. In very wet conditions, using a belt helps to prevent chaffing at the waist. Waterproof pants can be worn to help protect legs from rain, but may cause overheating. In very cold conditions, quilted over-trousers should be zipped over pants and boots for added protection.



Show examples of each piece of clothing during the explanation if available.

ADVANTAGES AND DISADVANTAGES OF FABRICS

Wool

Advantages. Wool has insulating properties even when wet. It remains comfortable until it is soaked and smolders rather than melts when exposed to excessive heat.

Disadvantages. It is heavy when wet and takes time to dry. When it is worn next to skin, it may cause itching, and may shrink when washed.

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COTTON

Advantages. Cotton is durable, breathable and absorbs moisture. It is a good fabric for underwear and items worn next to the skin in warm climates.

Disadvantages. It may be heavy when wet and can shrink if it is dried at high temperatures. It may tear and burn easily. Also, it is not windproof.

Fleece or Pile

Advantages. As an outer layer, fleece forces moisture away from the body while keeping it warm. It is lightweight, hardwearing and does not absorb moisture.

Disadvantages. Fleece is not windproof and does not compress easily. It can collect balls of fluff on the outside after long use.

Synthetic Fabrics

Advantages. These fabrics allow sweat to evaporate while keeping rain and other moisture out. They are usually windproof and an excellent choice for an outer layer.

Disadvantages. The seams may come apart in water. In very wet conditions, the fabric pores may become clogged. The evaporation of sweat from the outside of the fabric may result in heat loss.



An acronym that can be used to remember the principles when selecting and wearing clothing in the field.

COLD – Keep the garment **C**lean. Avoid **O**verheating. Wear it **L**oose and **L**ayered. Keep it **D**ry.

FOOTWEAR

Thick socks made of either wool or fiber-pile cotton are vital. Socks keep feet warm, dry and prevent footwear from rubbing against skin. Rubbing can cause blisters and chafing. In cold weather two pairs of socks, an outer layer and an inner layer, should be worn. The inner layer forces moisture away from the foot and move it to the outer layer to keep the foot dry. Socks should be changed daily before bed.

BOOTS

Boots with a hard sole and good cushion are just as important as socks. Being comfortable and stable makes for a more enjoyable time in the field. Ankle support is important in the prevention of ankle injury.

WEATHER CONDITIONS

It is important to be prepared for any type of weather. Wearing a toque, scarf and mitts during cold weather prevents heat from being lost through the head. Mittens prevent injuries such as frostbite by keeping hands warm and blood circulating. During warm conditions, it is important to wear sunscreen and a hat to protect from the sun. Extended exposure to the sun can cause burns and sunstroke.

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ACTIVITY

Time: 10 min

OBJECTIVE

The objective of this activity is to have the cadets dress up one of their peers in clothing for the field and the climate.

RESOURCES

- Clothes that represent the layering principle, to include:
  - a core layer,
  - a second layer,
  - an outer layer,
  - underwear, and
  - pants.
- Clothing that is made of different types of fabric, to include:
  - wool,
  - cotton,
  - fleece or pile, and
  - synthetic fabrics.
- Appropriate footwear.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Lay out the clothing according to its category prior to starting the activity.

2. Assign a cadet to be the “model”.

3. Question the cadets on what piece of clothing the cadet should put on first in accordance with the layering principle.

4. Continue until the cadet in fully clothed for the field.

5. When the cadet is dressed, question the cadets on the advantages and disadvantages of the type of clothing chosen for each layer (this might be easier when the cadet is taking each layer off).

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

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Teaching point 2 **Explain, demonstrate and have the cadets pack personal equipment for the field.**

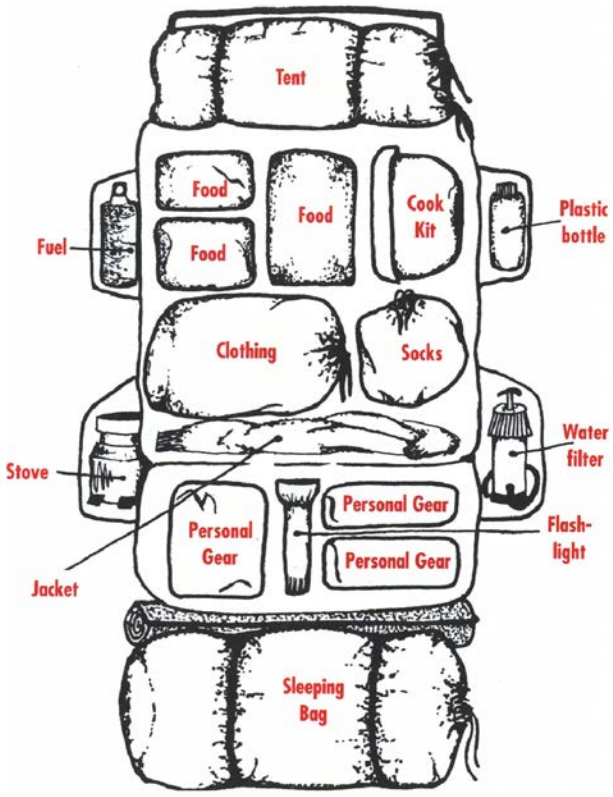
Time: 25 min Method: Demonstration and Performance

PACKING PERSONAL EQUIPMENT

While packing kit, ensure to place a large plastic bag inside the pack prior to packing it. This blocks moisture from reaching the contents. Each item should also be placed in a separate bag with the extra air removed to save space.

Place items in the pack by priority, with the most frequently used items on top or where easily accessible. The equipment needs to be placed in the pack so the weight is distributed and balanced appropriately. A poorly balanced pack can cause fatigue. The heaviest items should be placed near the bottom or the back of the pack to avoid back strain.

Ensure all items are secured to the pack to avoid losing items and having to constantly stop for adjustments.



Note. From Basic Essentials Backpacking, by Harry Roberts, 1989, Guildford, CT: The Globe Pequot Press.

Figure 1 A well-organized back pack

The tent should be placed on top of the pack with the sleeping bag and pad firmly attached under the backpack.

Food, clothing and a cooking kit are examples of what to place in the backpack itself.

Clothing should include extra socks, undergarments and polypropylene / synthetic t-shirt and pants.

Personal gear could include a first aid kit, waterproofed matches, flashlight, emergency candle and hygienic items. Items such as water bottle, stove, fuel canister, flashlight and a water filter can fit in the side pouches of the bag.

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Demonstrate the packing of a backpack with the cadets performing the skill. The following activity will assist in allowing the cadets to practice the skill. Where the instructional environment does not allow for this option deliver it using the demonstration method.

ACTIVITY

Time: 15 min

OBJECTIVE

The objective of this activity is to have the cadets practice effective techniques of packing personal equipment prior to participating in an aircrew survival exercise.

RESOURCES

- Rucksack / backpack (one per cadet),
- Sleeping bag (one per cadet), and
- Materials provided by the instructor.

ACTIVITY LAYOUT

1. The cadets shall pack their own bag during this time following the instructor's example.
2. The cadets are to use all materials that are given to them to pack their rucksack / backpack.
3. The cadets are to ensure their rucksack / backpack weight is evenly distributed.

ACTIVITY INSTRUCTIONS

1. Have the cadets pack their own rucksack / backpack using the materials provided by the instructor.

2. Upon completion, the instructor is to inspect the rucksack / backpack to verify all equipment is packed properly and that the weight is evenly distributed.

SAFETY

Nil.



Supervise the cadets' packing method closely. It is advisable to have other instructors assigned to provide additional supervision and feedback to cadets during this activity.

If the cadets do not bring their own kit, ensure that an interactive demonstration of each packing step is given.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. Why should a large plastic bag be placed inside the backpack prior to packing it?

Q2. What does a poorly balanced backpack cause?

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ANTICIPATED ANSWERS:

A1. This blocks the moisture from getting at the contents.

A2. A poorly balanced pack can cause fatigue.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Cadets have identified the appropriate clothes to bring with them to the field and how to effectively pack them. Selecting and packing approximately will help prevent fatigue and cold while in the field. Weather can be a large factor influencing survival. If one selects the right clothing, unnecessary injury and weather illnesses can be prevented. Improper packing techniques can cause discomfort and possible injury. It is important to ensure that equipment is packed properly prior to leaving for an aircrew survival exercise.

INSTRUCTOR NOTES / REMARKS

This EO is to be delivered at the squadron on the training night prior to the weekend aircrew survival exercise.

REFERENCES

C3-021 ISBN 0-7715-9035-0 McManners, H. (1994). *The complete wilderness survival manual*. Toronto, ON: McMillan Canada.

C3-024 ISBN 0-7627-0476-4 Roberts, H. (1999). *Basic essentials backpacking*. Guildford, CT: The Globe Pequot Press.

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