ROYAL CANADIAN ARMY CADETS

GREEN STAR

INSTRUCTIONAL GUIDE

SECTION 1

EO M123.01 – SELECT HIKING CLOTHING AND EQUIPMENT

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-701/PG-001, *Green Star 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.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to introduce the cadets to hiking clothing and equipment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to select appropriate day packs, water bottles, optional hiking gear and footwear prior to participating in a day hike.

IMPORTANCE

Cadets will be required to take part in many exercises while involved with the Army Cadet Program. It is important that, early in their training, cadets learn the skill of preparing their personal equipment for use during a hike.

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Teaching point 1 **Identify the characteristics to consider when selecting a day pack.**

Time: 5 min Method: Interactive Lecture

TYPES OF DAY PACKS

There are many devices made to assist in carrying loads on a hike or expedition. For day trips a small pack is required. It should comfortably hold everything desired for the hike, with a little extra capacity for winter jaunts. Some of these packs are:

- fanny packs (small packs);
- day packs; and
- backpacks.

Fanny Pack

The smallest category of pack for short hikes or hikes up to a few hours is a fanny pack. This pack is a small, unobtrusive pack that sits atop your buttocks, with a thin belt that clips around your waist. These are also known as waist, or lumbar, packs. The simplest of these packs consists of a pouch sewn to a piece of flat webbing, while the most elaborate ones hold upwards of 10 litres, and have padded belts and suspensions.

The fanny pack is lightweight, holds the load close to the spine, and to a person's centre of balance. When carrying articles with a fanny pack, the weight should be limited to 10 pounds.



www.mec.ca

Figure 1 Fanny Pack



www.abc-ofhiking.ca

Figure 2 Elaborate Fanny Pack

Day packs

Day packs are produced in numerous model types; however, all have shoulder straps and a waist belt. Most day packs have pockets for organizing your equipement and basic exterior features (i.e., axe loops and daisy chains).

Day packs may also come with an internal hydration system. This system provides a water bladder and hose exiting the top of the pack for easy access to water, or extra pockets for water bottles that are within easy reach when wearing the pack.

Models similar to those in Figures 3 and 4, allow for comfort while carrying loads up to 15 to 20 pounds.

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Figure 3 Day Pack



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Figure 4 Day Pack

IDEAL PACK PADDING

When properly adjusted, about two thirds of the pack's weight should ride on the hips, with the rest on your shoulders and upper back. Firm padding is mandatory for the following components:

- shoulder straps;
- waist belt; and
- back padding.

WAIST BAND

The waist band allows for the weight of a fanny pack, day pack, or backpack to rest on a person's hips and closer to the centre of gravity. The waist band, or hip belt, helps to make a pack's load more bearable. As the weight load increases, the effectiveness of the hip belt increases. Make sure the belt has soft, broad padding; heavier loads will cause the hip belt to slide down, so look for high-friction fabrics.

PACK CAPACITIES

As discussed, packs come in many different forms and sizes. The capacities of such packs differ with model type; however, there is a basic understanding that each type maintains a cubic inch capacity and weight association, as detailed in the following list:

1. fanny packs: Capacity of 10 litres; and
2. day pack: Capacity of 15 to 35 litres.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS

Q1. What are the three types of day packs available?

Q2. Explain the difference between a fanny pack and a day pack.

Q3. What is the ideal capacity of a fanny pack?

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ANTICIPATED ANSWERS

A1. Fanny packs (small packs), day packs, and backpacks.

A2. A **day pack** has shoulder straps and a waist belt. Most day packs have pockets for organizing items and basic exterior features. A **fanny pack** is a small, unobtrusive pack that sits atop your buttocks, with a thin belt that clips around your waist.

A3. Fanny packs: Capacity of 10 litres.

Teaching point 2 **Explain the optimum characteristics to consider when selecting hiking footwear.**

Time: 10 min Method: Interactive Lecture

BOOTS

The most important factor to consider when selecting backpacking footgear is fit. The footgear should be sufficiently sturdy to hold together throughout a trip. It should provide protection for the feet, and a firm foundation for walking and scrambling. Today's boots are derived from athletic shoe technology. They are light, comfortable and functionally suited. Common characteristics to look for when selecting a hiking boot are:

Sturdy. The boot should support feet and ankles from twisting on uneven surfaces. Higher boots with stiff ankle support provide lateral rigidity. The boot should also support the foot from over bending when placing too much weight on the toe or heel.

Lightweight. The lighter the boots the easier walking will be. Every extra pound of footwear weight can be compared to five pounds of added backpack weight.

Comfortable Fit. When worn, boots shall fit snugly with the heel snug against the wall of the shoe and a small amount of space for the toes to move.

Correct Size. Proper fitting boots ensure comfort during hiking. A boot fits correctly when:

- it is wide enough so the boot matches the width of the foot with little extra room;
- the tongue rests comfortably along the top of the toe; and
- the toes have room to wiggle.

SOCKS

The boot is only one part of the footwear system; socks are the first line of defence for the feet. A two-sock system is common in many activities. Unless hiking regularly in hot, damp conditions, consider wearing one pair of heavy socks and one pair of light inner socks. Always ensue socks are properly sized for the foot.

Inner Socks. This is a thin layer that helps wick, or pull moisture away, from the foot. They are usually made of a polypropylene material.

Outer Sock. This layer is most often made of wool or wool blend, which can absorb moisture. This layer cushions the foot and provides insulation.

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CONFIRMATION OF TEACHING POINT 2

QUESTIONS

Q1. What is the most important factor to consider when selecting footwear?

Q2. Socks play what part in the footwear system?

Q3. What is meant by wicking?

ANTICIPATED ANSWERS

A1. The footwear's fit.

A2. Socks are the first line of defence. They help remove moisture from the feet, and provide essential cushioning.

A3. Wicking is the ability to pull moisture from the feet.

Teaching point 3 **Explain things to take into consideration during the selection of water bottles.**

Time: 5 min Method: Interactive Lecture

WATER BOTTLES

One indispensable item in any wilderness traveler's kit is a water bottle. Depending on the wilderness to provide drinkable water is a risk not worth taking. Hikers either have to purify water to make it drinkable, or carry water with them.

Types of Water Bottles. Depending on a person's requirements when going on a day hike, one must select a water bottle that most suits their personal choice, equipment no comma and capacity.

- **Canteen.** Simple water storage device, usually contains a litre of water.
- **Rectangular.** Rectangular wide mouth storage containers. Wide mouths are easy to fill, and allow easy mixing of water additives (purification tablets, juice crystals etc.).
- **Bottle Bag.** Water storage vessel, when empty can be rolled and stored using little space.
- **Water Bladder Pack.** Water is stored in a backpack bladder or just as a bladder pack. This bladder is capable of storing large amounts of water with ease ranging from ounces to litres.

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www.abc-of-hiking.com

Figure 5 Canteen



www.mec.com

Figure 6 Rectangular Bottle



www.abc-of-hiking.com

Figure 7 Bottle Bag



www.outdooroutlet.com

Figure 8 Water Bladder Pack

Ideal Material Make Up. Water bottles can come in many forms, and be made of many materials. The optimum bottle is one that is easy to clean, does not pick up flavours easily, and is very durable. Of the many types of bottles available, Lexan and polycarbon bottles perform very well.

Wide Mouth Versus Narrow Mouth. The various constructions of water bottles have different advantages. The narrow mouth allows for slow poor and simple drinking. The wide mouth allows for fast pour and fill, mixing of additives, and allows for additional attachments (i.e., water purifier, mug mouth piece, drinking spouts, etc.).

Capacity Requirements. A hiker must plan water requirements, and determine what size of water storage vessel will be required for any hike. The absolute minimum amount of water a person needs under normal conditions is two litres per day. A person, when hiking, will require at least one litre every two hours. With increased exercise or temperature, fluid intake will increase.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS

Q1. What are the four types of water storage vessels?

Q2. What are the advantages of a wide mouth bottle?

Q3. What considerations should be taken when selecting a water bottle?

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ANTICIPATED ANSWERS

A1. Canteen, rectangular, bottle bag and water bladder pack.

A2. The wide mouth allows for fast pour and fill, the mixing of additives, and for additional attachments (i.e., water purifier, mug mouth piece, drinking spouts etc.).

A3. Capacity and durability.

Teaching point 4 **Explain the selection of optional hiking gear.**

Time: 5 min Method: Interactive Lecture



This teaching point covers similar material cover in EO M121.04 (Chapter 11 [Section 4]), Assemble a Survival Kit. Many items one should bring on a hike can be contained in a survival kit. Some other points have also been discussed throughout field training. All points are relevant and should be reemphasized.

OPTIONAL HIKING GEAR

When participating in a hike there will be many items that may be of use depending on the route, terrain, and season of travel. Preparation of additional items for hiking will ensure an enjoyable trip.

Raingear. A lightweight raincoat in case of unexpected weather.

Hat. A wide brimmed hat will protect the back of the neck, ears, and face from burning.

Extra Insulation layer. A light down vest, sweater, or fleece jacket will provide insulation should the weather be cooler than expected, and during breaks when sweat evaporates and the body cools.

Sunglasses. Protect your eyes against damage from the sun's light (i.e., ultraviolet, bright or intense light, and blue light).

Sunscreen. Blocks or prevents the skin's exposure to the sun, or ultraviolet light. The skin will burn when the amount of exposure to the sun, or ultraviolet light source, exceeds the ability of the body's protective pigment to protect the skin. According to the Canadian Dermatology Association a minimum of SPF 15 with UVA and UVB protection should be worn.

Insect Repellent. Apply insect repellents to ward off unwanted insects. The repellent should be applied to the exposed areas of the body. Many insect repellents rely on chemicals such as DEET to repel insects and have effective durations per application.

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WARNING
DEET in high concentrations can be harmful to a person's health, specifically the nervous system.
NOTE
Health Canada recommends: • children under 6 months are NOT to use insect repellents containing DEET; • children aged 6 months to two years are NOT to use insect repellents containing DEET; • children between 2 to 12 years: apply no more than three times a day using the lowest concentration of DEET (10 percent or less); and • individuals 12 years or older: apply insect repellents containing no more than 30 percent DEET.

Camera and Film. Many hikes into the wilderness will expose sites of pure beauty. Having a camera on hand to capture such moments will allow one to share, keep and record many moments.

Notebook and Pencil. Allows one to record hike details, route choice, memorable moments, injuries etc.

Bathing Suit and Towel. Many hikes into the wilderness will cross paths with rivers and bodies of water. One may want to stop and go for a swim or wash. Packing a bathing suit allows for that option when with a group.

Binoculars. Provides the ability to see far off objects and routes. One may want to view wildlife from a distance This can be a very practical item in the field.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS

Q1. Name four optional hiking gear items.

Q2. Why are sunglasses important?

Q3. What is the minimum SPF number one should wear while exposed to sunlight?

ANTICIPATED ANSWERS

A1. Any four of the following: Camera and film, notebook and pencil, bathing suit and towel, binoculars, sunglasses, sunscreen, and insect repellent.

A2. Protect your eyes against damage from the sun's light.

A3. A minimum of SPF number 15 with UVA and UVB protection should be worn.

END OF LESSON CONFIRMATION

QUESTIONS

Q1. What is the most important factor to consider when selecting footwear?

Q2. Socks play what part in the footwear system?

Q3. What are the four types of water storage vessels?

Q4. What are the advantages of a wide mouth bottle?

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Q5. Name four optional hiking gear items.

Q6. Why are sunglasses important?

ANTICIPATED ANSWERS

A1. The footwear's fit.

A2. Socks are the first line of defence.

A3. Canteen, rectangular, bottle bag and water bladder pack.

A4. The wide mouth allows for fast pour and fill, mixing of additives, and for additional attachments (i.e. water purifier, mug mouth piece, drinking spouts, etc.).

A5. Any four of the following: Camera and film, notebook and pencil, bathing suit and towel, binoculars, sunglasses, sunscreen, and insect repellent.

A6. Protects your eyes against damage from the sun's light.

CONCLUSION

HOMEWORK/READING/PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Participating in hiking activities will be commonplace for Army Cadets. The ability to knowledgeably forecast required materials and items for a hike is important when cadets are required to prepare their own personal equipment for a hike.

INSTRUCTOR NOTES/REMARKS

This lesson shall be delivered prior to EO M123.02 (Participate in a Day Hike).

Instructors are encouraged to present locally available examples of hiking gear to better demonstrate the various styles and materials available.

REFERENCES

C2-012 (ISBN 0-89886-643-X) Weiss, H. (1988). *Secrets of Warmth for Comfort or Survival.* Seattle, WA: The Mountaineers.

C2-017 (ISBN 0-7627-0476-4) Roberts, H. (1999). *Basic Essentials, Backpacking.* Guilford, CT: The Globe Pequot Press.

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