

NAVIGATION

90 Min.

Lesson Six

TRAINER'S NOTES:

In this lesson, participants will complete a "Mock Trip Plan" or backup emergency trip itinerary in their work groups. They will learn how to complete the "5 Steps to a Bearing" as part of trip planning and route selection logistics. They will learn how to calculate point-to-point bearings corrected from map to field (true north to magnetic north, and declination/deviation) so that they can leave correct information at home. Participants will discuss various communications and hi-tech equipment, including Cellular Phones, Hand-Sat Phones, VHS and short-wave Radio, Personal Locating Beacons (EPIRB'S), G.P.S. Units, and two way radios. A look at a case study will reveal the potential benefits of carrying communications equipment, especially for instructors. Finally, participants will examine reliable methods of signalling for help, based on the universally accepted emergency/distress codes used by S.A.R..

Objectives:	Tips:
Participants will: <ol style="list-style-type: none"> Learn how to complete and/or design backup trip plans/itineraries, and with whom to leave these emergency plans, in case something goes wrong. Learn how to calculate map bearings, trip routes, grid point references & map co-ordinates, and other navigational aides/techniques. Learn about the various types of communication(s) equipment and technology available for use in the great outdoors (for rescue, emergency and staying found goals). Examine the various methods of signalling (for help) including high-tech and primitive techniques. Participants will learn about universally accepted signalling formats, what S.A.R. looks for, and what to avoid. 	<p><i>This lesson should reinforce the student's desire to learn more about compass work. This will not make a new compass navigator competent. It is recommended that students are made aware of other compass reading only courses offered through WTI.</i></p>

Resources Required for this Lesson:	Tips:
<ol style="list-style-type: none"> Trip Itinerary Handout (CSAR and REP Produced sample) Sample Topographical Maps, Air Photos, and Compasses Overheads (5 Steps to a Bearing, Magnetic Declination, the Compass, Communication Equipment) Compasses Local Topographic Maps Slide show (smoke signals, tripods etc.) Chalkboard/flipchart Background readings 	<p><i>Use background readings that reflect your clients. For example: Choose maps that are for the area that you will be camping in, and not necessarily where your classroom is.</i></p>

Lesson Sequence:	Time Allotment:
Introduction: <ol style="list-style-type: none"> <i>Most wilderness travelers leave no concrete, specific emergency backup trip plans behind in the event that something goes wrong. In many cases, they leave some vague plans behind such as "going to</i> 	<p>2 Min.</p>

<p><i>Algonquin Park for the weekend, or going hiking on the Bruce Trail for the day, or going skiing in the Kanaskis". With these type of plans (or lack of plans), searchers have a tall task at hand to locate lost victims. In this lesson, you will learn how to not put yourself in that situation.</i></p> <p>b) Divide the class into groups of 3 – 4 people. Provide the groups with sample trip itineraries and emergency plan kits that should be completed for every trip. In the groups, have participants brainstorm a definitive list of whom to leave the plans behind with. (Pages 75-76)</p> <p>c) Discuss lists as a group. Have participants consider how this list should vary according to various situations i.e. trips planned on National and Provincial Parks, Crown Lands, Private Lands and Trail Systems, day trips versus overnight trips versus expeditions. Remind participants that a "buffer time" should be built in when leaving plans behind, since you don't want to create a situation where a premature search is started for no reason, whereas you want searchers to begin the search without much delay.</p> <p>d) Lead a discussion about the instructions that should be left with family/friends, the Provincial Police, Provincial or National Park Staff, and Coast Guard or R.C.M.P. in some regions. Using the overhead <i>Leaving Plans Behind</i> to review with participants the following items:</p> <ul style="list-style-type: none"> ° Emergency trip plans/itineraries – which should include: <ul style="list-style-type: none"> names/phone numbers/S.I.N. and health card numbers/health and medical information/outdoor skill levels, and any other pertinent information pertaining to individual trip participants ° starting/departure time, and return time (including an "Alert" time when if contact has not been made, something has gone wrong) ° Topographic map copies with detailed itinerary and description of trip route(s) ° U.T.M. grid point references ° Map co-ordinates ° Where the vehicle(s) are parked specifically; its description & license plate number (also leave and additional trip itinerary copies in the windshield of your vehicle) ° Also leave important communications equipment numbers i.e. cell phone, satellite phone, VHS locator or short-wave phone numbers. <p>e) Explain the key things about using a compass and taking a compass bearing. Include information about topographical maps, types of compasses, parts of a compass, true north versus magnetic north, grid point references and map co-ordinates, and a review of the "5 STEPS TO A COMPASS BEARING" (p. 79), each group will complete the orienteering exercise on page 90. Spend as much time as possible taking point to point bearings (from one starting point on the topographic map, to an ending point).</p> <p>f) Have students practice finding various locations using the compass and map. Have the participants complete the exercise found on page 90 of their student workbook.</p> <p>g) After the students have become comfortable with finding bearings and following bearings, the instructor should go over the following tips:</p> <ul style="list-style-type: none"> Π Understand the difference between true north and magnetic north Π Know how to calculate U.T.M. grid point references and map co-ordinates Π Understand and memorise the 5 Steps to a Compass Bearing Π Know how to identify land-features on a topographic map (i.e. swamp, hills, roads, trails etc.) Π Become proficient with the watch-technique of navigating, and 	<p>10 Min.</p> <p>3 - 5 Min.</p> <p>5 – 10 Min.</p> <p>20 Min.</p> <p>5 – 8 Min.</p> <p>5 Min.</p>
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<p>with the concepts of veering, high-land versus low-land, and reciprocal bearings</p> <p>▮ Remember to store your compass away from other compasses, or other metal objects.</p> <p>▮ Where possible, buy your topographical maps already waterproofed, or laminate them yourself (you can buy laminating liquid in most outdoor stores).</p> <p>▮ Don't rely on other maps that are not to scale for use with a compass.</p> <p>Communication Devices in the Wilderness</p> <p>f) Have participants, in small groups, work on questions regarding Communications equipment found on page 96 of the student workbook entitled <i>Communications in the Wilderness</i>. Discuss together with the instructor's input, any questions or comments they might have.</p> <p>g) Have the participants individually review the fundamentals of search and rescue, and the S.A.R. System. Have participants answer the questions entitled <i>S.A.R. Signalling</i> found on page 96 of the student workbook.</p> <p>h) Using the provide Slide Show entitled <i>Signals to be Found</i> in the Appendix *, go over the various examples of signals. Some are: smoke signal tripod, birch or cedar tree signal, 3 large piles of debris or fires, large SOS or HELP signals in the snow.</p> <p>i) Give participants enough time to read over the Case Study called <i>Ski Club Lost Group Occurrence</i> on page 97 of the student workbook. Discuss the case with the group. Focus on what went well and what should have been done differently to avoid getting lost.</p>	<p>3 - 5 Min.</p> <p>3 - 5 Min.</p> <p>10 - 15 Min.</p> <p>5- 10 Min.</p>
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