

NORTHWEST OUTWARD BOUND SCHOOL

INSTRUCTOR MANUAL

1968

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## THREE SISTERS WILDERNESS

### The Northwest OUTWARD BOUND Classroom

This wilderness classroom lies astride the summit of the Cascade Mountain Range in central Oregon, in parts of the Deschutes and Willamette National Forests. It is a beautifully rugged high country made up of volcanic mountains, lava flows, glacial lakes, and alpine vegetation.

This area was reclassified in 1957 as a Wilderness and is managed by the Forest Service of the U. S. Department of Agriculture. It is 196,708 acres large and is crossed by trails which allow the chance to retreat from civilization. For the most part, it is in its natural state.

The Three Sisters Wilderness Area's prominent features are a result of volcanic activity which began some 40 to 60 million years ago and continued up to a thousand years ago. This activity has produced lava mountains, cinder cones, obsidian cliffs, and lakes dammed by lava flows.

Our summits include the cluster of the Three Sisters, the Husband and Mt. Washington. The North Sister, the most difficult to climb in the cluster, has a summit of 10,085 feet. The Middle Sister, smallest of the three, has a summit elevation of 10,047 feet. The South Sister, tallest, has a lake a quarter mile in diameter on its 10,358 summit. The Husband is a three-horned, eroded lava mountain, which has a peak of 7,524 feet in elevation. The Mt. Washington Wilderness, to the north of the Three Sister area, has its 7,794 foot Mt. Washington as its dominant terrain feature.

The lava in these mountains is known as a'a or chunky. Its rough, jagged and sharp character is a hazard to all travelers. One must also watch for loose and falling rock in climbing any of the mentioned

mountains. The Obsidian Cliffs, close to the Three Sisters group, are "volcanic glass" and were the local Indian source of arrowhead material.

The 240 miles of trail not only take you to the alpine areas, but also to the lower elevations (6000' - 3000' levels). Our classrooms in these forest areas are adequately furnished with the mighty Douglas Fir, mountain hemlock, western hemlock, white fir, western red cedar, and a sprinkling of pines. The water supply is the weaving of cold mountain streams fed by Collier Glacier on the slopes of the Sisters or perhaps by the many springs this area has. There are many natural lakes scattered throughout the forests. This water is all part of the Willamette River Watershed, in turn the Columbia River and Pacific Ocean. The flora and fauna are varied and useful in our program.

The cracks in the lava are sometimes filled with purple rock penstemon or wild heather. The meadows red Indian paintbrush and blue lupine, not to mention the Jacobs ladder, cat's ear, avalanche lily, shooting star; all add to the classroom's ever-changing studies. The fish in the streams and lakes (Eastern Brook, Rainbow, Mountain Cutthroat), are tools to be used. Deer and occasional bands of Roosevelt Elk are particularly interesting to the students. Black Bear, Cougar, Bobcat, and Coyote are in the vicinity. The many small mammals: rabbits, porcupine, squirrel; the fur bearers: marten, raccoon, and mink make up a library of topics for discussion. Blue and ruffed grouse inhabit the area year round, especially the wild huckleberry patches (Olallie to the Indians) that are well used in the fall.

This area's annual rainfall of 100 inches and temperatures varying in summer from 80 to 90° F and to a chance of -30° F in the winter provide an ideal classroom for the OUTWARD BOUND teachings. We will learn from

these mountains, meadows and forests to our fullest extent, but always leaving them the way we found them, remembering that conservation and just plain thoughtfulness are also part of our OUTWARD BOUND educational creed.

### INTRODUCTION TO OUTWARD BOUND

At OUTWARD BOUND, we are concerned that each student learn the minimum skills for self-sufficiency in the wilderness. We are more concerned about how he uses these skills. Wilderness will remain unspoiled for future generations only if protected and cared for by those who use it today. It is incumbent upon us that we set high standards for ourselves in the use of wilderness and minimize our impact as much as possible.

Students at OUTWARD BOUND should camp in the wilderness spirit. Minimize buildings, whether for kitchen implacements or shelter. Don't disarrange scene with hard to eradicate ramparts of rock as fireplaces or windbreakers. Keep cutting to a minimum.

Never leave a fire unattended. Build a minimum fireplace. Clear a wide circle around your fire down to mineral soil. When breaking camp, drown fire completely, stir, and drown again until ashes are cold to touch. Bury ashes and charcoal. If you start from scratch in places not camped before, return fireplace rocks to natural positions when you leave.

Don't excavate for bedsites. Try to find naturally level and

sheltered spots. Erase evidence of your bed when breaking camp. Double-check area before you move on. Forgotten laundry is litter.

Latrines should be constructed when a large party plans a protracted camp. You will have the necessary tools in each patrol. Latrines should be inconspicuous and placed well away from water supplies. If no latrines, go far from camp and trail, dig deep and bury. Swim or wash at a distance or below from where camp water is drawn. When washing, prevent pollution by keeping soap or detergent out of lakes and streams.

Place candy wrappers, raisin boxes, orange peels, etc. in pocket or pack for later disposal in fire or garbage sack. If you are responsible for camp cleanup, burn what will burn. Edibles may be concealed or scattered well away from camp and trail, where animals can find them without digging. Carry cans, bottles and worn-out gear out of the mountains.

Students at OUTWARD BOUND have no business in public shelters. You will, however, be sharing campsites occasionally with other wilderness users. Always be a considerate neighbor. Don't crowd other camps or sleeping areas. Noise is out of harmony in a wilderness experience.

This manual is not designed as a comprehensive textbook of wilderness skills or leadership training. It is intended to be an outline of the major building blocks of the standard OUTWARD BOUND course. The policies of OUTWARD BOUND are somewhat controlled throughout the world, but the administration is flexible. This handbook will indicate the format we will try to follow and some of the procedures we will use. It will attempt to show how OUTWARD BOUND is unique in the wilderness education field in that we use the out-of-doors not as an end in itself, but as a means to the end of self-discovery.

This then, is mainly a resume of the program; it is not a step-by-step manual. For more knowledge about specific skills, refer to the books alluded to in the "reference" section. These are the standard texts in the field and will go into more detailed explanations. All of these books will be available at the office tent.

Your job, as an OUTWARD BOUND instructor, will be difficult and demanding. You cannot expect to discharge your duties without almost total and continual involvement in the program. If you're not taxed and stretched and turned inside-out, then something is wrong. This is not an 8 - 5 job nor is it a job which can be done by "putting in your time" whatever the amount. It is at times a 24-hour job and it is, at all times, one which requires your complete devotion, body and soul.

Moreover, you must continually ask yourself, "Am I getting to the guys?" Your approach will be unique, your teaching style your own. Regardless of your methods, you must continually reassess your impact. The success or failure of OUTWARD BOUND depends ultimately upon the skill of its instructors in the field. OUTWARD BOUND does not work by itself, but it does work. Your job is to make it work.

Whenever it can be appropriately done, remind and encourage the kids to take advantage of the relationships established here in the wilderness to work together in the city, in school, at home. Our best advertisement and, in fact, our finest achievement and claim to credit is an inspired OUTWARD BOUND student. What he does when he leaves will affect not only his own future, but ours as well.

The following manual deals primarily with the nuts and bolts of the instructional program at OUTWARD BOUND. In the process of that



instruction, I hope that the words of Cedric Wright will somehow find their way into each classroom hour:

"We need an education of the heart and spirit.

The most important things belong FIRST, not last, or never."

B A S E   C A M P

TENTATIVE DAILY SCHEDULE

6:00 a.m.	Rise, Run, Dip
6:30 a.m.	Duty Patrol to Kitchen
6:45 a.m.	Breakfast
7:30 a.m.	Inspection and Assembly
7:45 a.m.	Morning Activity begins
11:45 a.m.	Duty Patrol to Kitchen
12:00 noon	Lunch
1:15 p.m.	Afternoon Activity begins
5:30 p.m.	Duty Patrol to Kitchen
5:45 p.m.	Mail
6:00 p.m.	Supper
7:00 p.m.	Camp Store
8:00 p.m.	Evening Program
10:00 p.m.	All Quiet

RADIO REGULATIONS

## CITIZENS BAND SETS:

1. All mobile units will go on the air at even hours between 8:00 a.m. and 8:00 p.m. every day unless otherwise instructed.
2. Except for emergency, do not attempt to transmit when other traffic is on the air.
3. No profanity or indecent language will be used.
4. NOBS call letters: KPC 2392, will be used in all transmissions.
5. Use of radios is carefully regulated by the Federal Communications Commission. Our license is issued by the Commission and our use of the radios is governed by its regulations. We are also subject to periodic monitoring by the FCC.

## CALLING PROCEDURE:

1. Extend the aerial, turn radio on, adjust "squelch" so that static just disappears. Wait to see if air is clear.
2. Identify yourself and the unit being called: "KPC 2392 Unit 3 to Base."
3. Unit being called will acknowledge; message can begin.
4. When clearing the air, identify yourself again. Both ends should clear.
5. Do not talk directly into microphone. Hold it beside your mouth, against your cheek for best results.
6. We will be using Channel 9 most of the time.
7. Emergencies have priority. If you have a genuine emergency, break in and ask to have everyone else stand by.

## "MOBILPHONE"

These radios will be used for long distance communication between vehicles, with our Eugene office and other agencies, such as USFS and MRSCO. The network is monitored 24 hours by operators in Eugene, Salem, Bend, Roseburg, etc., through which we can call on the telephone. Each

of our units has a separate number:

Base Camp . . . . . 39  
 Intern. Carryall . . . . 3915  
 Intern. Pick-up. . . . . 3914  
 Rescue Rig . . . . . 3913

In calling each other or the operator, merely identify yourself and the unit being called, as "3915 to 3914" or "3915 to Eugene."

Though these radios will monitor without having the vehicle's key on, you cannot transmit without starting the engine. All rules for CB operation apply as well to Mobilfone. In addition to their long-range capability, we will be using these radios a good deal for our routine communications around camp.

For emergency calling and increased efficiency when transmitting is difficult, we will use the following "10" code. This coincides with the "10" code used by other search and rescue support units throughout the state.

#### EXPLORER SEARCH AND RESCUE "10" CODE

TEN 1 - Receiving poorly, change location	
TEN 2 - Receiving well	
TEN 3 - This is a test	TEN 16 - Victim OK
TEN 4 - Acknowledgment (OK)	TEN 17 - Need litter and first aid crew
TEN 5 - Use Relay Unit	TEN 18 - Returning to base
TEN 6 - Standby	TEN 19 - Return to base
TEN 7 - Out of Service	TEN 20 - What is your location
TEN 8 - In Service	TEN 21 - Negative
TEN 9 - Repeat message	TEN 22 - Mission completed
TEN 10 - Have complete sweep No. _____	TEN 23 - Advise correct time
TEN 11 - Transmitting too rapidly	TEN 24 - Rerport at next call time
TEN 12 - Any message for this station	TEN 25 - Send officer to team
TEN 13 - Advise weather conditions	TEN 26 - Continue search pattern
TEN 14 - VIP's present	TEN 27 -
TEN 15 - Have located victim	TEN 28 -
	TEN 42 - Victim presumed dead; Send coroner.

Keep a copy of this code within reach whenever you may be using a radio; coordination with other rescue efforts may depend partially upon the use of this code.

"Mobilfone" operators and users have an abbreviated and somewhat different form of "10" code. You probably will not need it, but it is as follows:

- 10-1: I am in the vehicle; do you have any calls for me?
- 10-2: I'll be away from my vehicle; hold my calls.
- 10-3: Wait a minute, please.
- 10-4: OK, I understand.
- 10-5: Repeat, I didn't understand.
- 10-7: Call my office, please.
- 10-8: What is your location?

To call "Mobilfone" operators, thereby getting in contact with our radio net via the telephone, the following numbers must be used:

Bend . . . . .	.382-8811
Eugene . . . . .	.342-2421
Salem . . . . .	.362-2461
Roseburg . . . . .	.672-2523
Medford . . . . .	.773-7471
Corvallis . . . . .	.752-7139
Newport . . . . .	.265-7775



## ROPES COURSE, WALL AND BEAM

SAFETY RULES

This activity is practiced to increase self-confidence, overcome fear of heights, and increase agility and strength. Although simple in pattern, it contains many potential hazards. Care and vigilance must be maintained.

It is important that a quiet, calm and friendly atmosphere be maintained. Avoid seeking quick exciting achievements. Boys operating under too great pressure of encouragement, censure, or lack of harmony are more prone to accident.

1. There must always be an instructor in charge before students go on the ropes course, wall or beam.
2. Proper clothing must be worn by all students: long trousers, long-sleeve shirt, jacket, tennis shoes or boots. No shorts, sheath knives, combs, or smooth leather-soled shoes.
3. In every period of training on the ropes course, an instructor must go through it first to check all ropes and fittings.
4. Slack ropes must be tightened before the boys follow.
5. Any signs of undue wear and tear or malfunction must be reported to the director and instructor in charge of ropes course immediately.
6. Only one student may be on a part of the ropes course at a time.
7. An instructor must be on the zip wire platform to supervise each student's descent. All students must have a safety line attached to them.
8. Students are not permitted to hang down from the top of the wall by their feet or go over the top feet first - nor must they ever climb it with their head below the level of their waist.
9. Items not considered part of ropes course and available for student use in leisure time: peg-board, chin-up bar, climbing wall.



ZIP LINE SAFETY RULES

1. The instructor of the first patrol to use the zip line each day must check the rope and knots of the zip line before it is used by students. A competent person must cross the bridge to check the knots below.
2. Procedure for clipping in safety line:
  - A. Using one end of slip rope, tie a bowline around waist.
  - B. Tie a figure-of-eight knot in the other end so that the sling is about the length of the arm extended. Tie off the ends of all knots.
  - C. Place either a locking carabiner or two plain carabiners with gates reversed in the loop of the figure-of-eight knot and clip into the zip line. Lock the gate if using a locking carabiner.
  - D. Hold onto the block arrangement as you jump.
3. Send a competent person down first who remains at the bottom and supervises boys as they land.
4. An instructor must remain, at the top of the zip, to inspect every student's clipping-in procedures and directly supervise his descent.
5. Each student must receive an okay from instructor before jumping.
6. Hard hats must be worn.

FIRE SAFETY

1. The best way to fight fires is to prevent them. The nearest fire engine is 75 miles away. The charred trunks that are scattered around the countryside attest to the devastating effects of forest fires. Avoid them at all costs. Napalm on the front lines is the only thing worse than a forest fire in the big timber of the Pacific Northwest.
2. The siren-horn is kept inside the door of the Director's office.
3. 55 gallon water barrels, buckets and shovels are kept in all tent areas FOR FIRE USE ONLY. Back-pack pumps are available at the supply tent. The school's fire pump will always be located in position near the stream or at the supply tent.
4. Any person discovering a fire should try to put it out if this is possible. Use dirt, beat it with blankets, jackets, etc., and shout for help.
5. If the fire cannot be put out successfully by one man, report to the Director's office and sound the alarm.
6. Upon hearing the alarm, students should first be sure that they are not in danger. Then put on boots, heavy pants, shirts, hard hats and gloves; bring the Indian back-pack pumps from the supply and assemble in front of the office tent by patrols.
7. The duty instructor will proceed to the scene of the fire to investigate and issue the necessary instructions.
8. The Rescue Patrol will pick up shovels, axes, Pulaskis, the back-pack pumps, and activate the school pump. Other patrols will be given assignments by the duty instructor. After investigating the fire, the duty instructor will proceed with required personnel to the scene of the fire and take the necessary action.

## DUTIES OF DUTY INSTRUCTOR

Each Patrol Instructor will have the following duties:

1. Wake school at 6:00 a.m.
2. Supervise dip.
3. Supervise duty patrol in all its tasks, especially serving.
4. Assign morning readings.
5. Carry out morning inspection.
6. Keep camp on schedule.
7. Check students' mess gear for cleanliness at meals.
8. Insure all is quiet by 10:00 p.m.
9. Responsible for daily safety check:
  - A. Fire control and prevention
  - B. Fuel dump security measures
  - C. In camp aid kits
10. Work out the daily schedule of activities beforehand with the Chief Instructor and post the daily schedule. Inform everyone involved when changes are made.

## DUTY PATROL

A term you will hear time and again at OUTWARD BOUND is "duty patrol." What is a duty patrol? In answer, I would say:

- 1) There are jobs which must be done to insure the health safety, and pleasantness of surroundings for everyone living in camp.
- 2) These jobs must be done promptly and efficiently.
- 3) OUTWARD BOUND attempts to give an opportunity for service to all of its students -- what better way than to help others enjoy their camp and in turn, to be helped by them toward this same end?

For all of these reasons, the duty patrol serves promptly and efficiently, to carry out the tasks which are part of the routine, which are necessary.

Many of you may think: "More chores!" or "Busy work!" The tasks of the duty patrol are not simply chores or busy work. They aren't fun, like playing on the ropes course, nor are they exciting, like climbing a mountain. But, they are services, like our services as a search and rescue unit or as a fire suppression unit.

Working on a fire-line is hard, tedious work, but we feel a certain satisfaction because we are saving lives and livelihoods for the thousands who live in, work in, and enjoy the wilderness.

Working in a chow-line (one of the many duties of the duty patrol) is a lot like working on a fire-line -- it is not exciting, but we read in the hungry faces the reward for doing the job well.

OUTWARD BOUND is a community, and in any community, each citizen must help the others for the good of all. Each of you, in his daily contact with others, will have an opportunity to contribute to the well-being of the community through service. Duty Patrol is only one form of service, but it is an important one. We hope you will all hold the ideal of service foremost, whether you're scrubbing pots on duty patrol, searching for a lost youngster in the wilderness, or simply helping a friend overcome his fear of heights. As Kurt Hahn, founder of OUTWARD BOUND, stresses, it is most important to practice care and skill, and through this to discover the true rewards of conscientious service.

ALAN H. AMOS  
Staff, 1966

DUTIES OF DUTY PATROL

## KITCHEN:

1. Arrive with clean hands.
2. Duty Patrol should be at the mess tent 15 minutes early for each meal, in order to eat early and set up the serving line.
3. Prepare wash water and empty only wash water into sump.
4. Supply kitchen with water for the present meal and the next meal.
5. Wash all cooking utensils, let them drip dry.
6. Help cooks prepare for the next meal.
7. Keep water cooler filled.
8. Change wash water as needed.

## CLEAN-UP:

1. Burning of disposable waste is done by USFS fire permit only. Make certain this permit is current before lighting fire.
2. Crush burned cans in burning pit and set aside.
3. Collect trash and cans from kitchen, office and students' area and burn it in the burning pit during burning hours only.
4. Supply student latrine with toilet paper.
5. Put one tablespoon of chlorinated lime INTO each seat hole daily.
6. Put one ounce of pine oil into a #10 can and fill with water. Use this to flush the urinals.
7. Carry out any required maintenance of the student latrine and urinals to keep them fly-proof.
8. Pick up all litter in camp except in student and staff tent areas.
9. Insure a fire wood supply for the assembly area.
10. Fill lanterns for kitchen, supply room, office and dining areas two-thirds (2/3) full of WHITE gas.

-----

Points will be given, up to the maximum indicated in parentheses following, for failure to successfully complete the duties outlined on the Duty Patrol Sheet:

Kitchen:	(20)
Clean-Up:	(10)
Emergency	
Check:	(20)

DAILY INSPECTION

## (TENT AREA)

MESS GEAR (7)	Mess kits, cups and utensils should be clean and hanging open exposed to the air and sun.
FIRE CONTROL (6)	Candles in holders so they cannot fall over. Matches in match safes. No litter.
FOOD (5)	No food in the tents.
BEDDING (4)	Hang bags out to air from breakfast until morning meeting. Dip clothes hung out to dry. Wash out sneakers if dirty.
TENT CARE AND NEATNESS (3)	Tents properly erected and used. Items in tent should be neat, clean and dry.
AREA NEATNESS (2)	No litter.
TOOLS, etc. (1)	Return all tools not in use.

\*\*\*\*\*PLEASE DO NOT BUILD PATHS OR WALKWAYS. Axe or knife throwing or otherwise defacing trees is prohibited. Man has his hands full attempting to live harmoniously with himself and in his communities without re-arranging nature.

Points will be given, up to the maximum indicated in parentheses, for failure to meet the above standards. High scores are poor.

## EMERGENCY: (TO BE COMPLETED BY 8:00 A.M.)

- Fire-Check:
1. Student area for--
    - a. Fire water (barrels should be full)
    - b. Three red shovels
    - c. Three red buckets
  2. Indian pumps full and working; oil slides occasionally.
  3. Fire pump in working order and filled with gas & oil.
  4. Hazel hoes, shovels and axes sharpened.
  5. Burning pit.

Rescue: Check the cache to see that it is complete and in a state of complete readiness.

### FIRST AID AND PERSONAL HYGIENE

The success and enjoyment of every outing depends upon the physical well-being of each and every member of the party. Hiking and climbing parties leaving for an extended or even short trip should realize that they will be far away from sources of medical aid. OUTWARD BOUND's base camp conditioning program seeks, among other things, to get boys into good enough physical condition to meet the demands of the mountain environment. In addition, experience has shown that "mountains don't care" and that accidents can and do happen. Accident victims in such circumstances can only be sure of safe handling and protection if all members of the patrol have a basic knowledge of first aid.

Staff and the quality of instruction are the primary factors in accident prevention. Our training continually emphasizes the simple and the fundamental in both equipment and techniques. The problem-situation method of first aid instruction follows this pattern. Mountain first aid differs from the standard courses only in that it takes into account that medical aid is often a long way off. It necessarily includes some common sense precautions that will prevent the development of trouble, and some suggestions about what to do for the miseries that result from neglect of these precautions.

#### Some pointers on prevention:

Each student is required to pass a physical examination by his family physician prior to being enrolled in the course. These records are on file in the office and should be reviewed by Patrol Instructors before the course begins to pick up such things as allergies and any organic irregularities noted. Each student has been approved for an OUTWARD BOUND course by his family physician. Each student has also been required to bring immunizations up-to-date.

Irrespective of the preparation and conditioning program, however, specific precautions must be taken with regard to the following ailments and inconveniences:

1. NAUSEA: Many causes but mainly altitude, hunger (hurried eating), insufficient food or water, poor or cold breakfast and digestive upset. Pay attention to fluid intake and to elimination. Encourage students to report irregularities to Patrol Instructors.
2. BLISTERS: Our No. 1 problem! Students must appreciate the value of properly fitted and broken-in boots; of wearing a pair of cotton socks under a pair of wool; of removing wrinkles from socks. Encourage students to report irritation immediately. Air and sun socks, feet and boots daily. Removing boots and socks at every other rest stop should be mandatory.

3. HEADACHES AND MUSCLE CRAMPS: Innumerable causes, many still unknown. Inadequate rest and indigestion, aggravated by altitude will do it. Poor physical condition, prolonged sweating and loss of salt are prime causes of cramps.
4. SUNEURN: Never underestimate the severity of high altitude sun. A preliminary tan seldom will stand up under prolonged exposure to high country sun.

Personal hygiene is largely a matter of attitude and self-respect, more than it is a series of rules. Many students at OUTWARD BOUND, however, must be taught the simple realities of wilderness living.

The secrets of the sun should be the first to be appreciated. The sun medicine is known to all woodsmen and campers, and they learn it from the Indians.

Tents should be opened wide in the morning to let the sun medicine in, mess-kits and eating utensils should be spread in it after washing, soiled clothes should be hung in it, sleeping bags and liners open to it daily and the body bathed in it often, as long as possible without harm.

As Bernard Mason expresses it in his book on Camping and Woodcraft: "The sun medicine by day and matchless rest that comes from sleeping in the cool scent of night air of the open spaces -- these are two of the secrets of the healthy life that is the prize possession of the outdoorsman."

Our objectives in this area of instruction are mainly to enable the student to:

1. Manage personal injuries, particularly sprains, fractures, wounds and burns.
2. Solve problems of personal hygiene and provide for personal needs in the wilderness.

REFERENCES: Red Cross Manual  
Emergency Medical Guide, Henderson  
Medicine for Mountaineering, Wilkerson



H I G H   C O U N T R Y

SAFETY IN THE HIGH COUNTRY

Before a group departs for the high country, the following essentials must be provided for:

TO FIND YOUR WAY:	Map of the area Compass Flashlight with batteries
FOR YOUR PROTECTION:	Spare food and water Extra clothing Sunglasses
FOR EMERGENCIES:	Waterproof matches Knife First Aid kit Travel plan on file

Basic Rules for Travel in the High Country:

1. Don't split up. Never go alone. A party of four is preferable; three is minimum.
2. Do not mistake climbing skill, athletic ability, or your good physical condition for experience. A safe person in the mountains is one who learns through years of experience with competent leaders to exercise good judgment.
3. Learn the proper equipment and have it with you.
4. Weather is important to safe and enjoyable mountain travel. Bad weather can confuse you and make an otherwise easy trip tough -- or even disastrous.
5. Keep the party together at all times. Slowest man sets the pace. Establish rhythm. Frequent eating will extend endurance.
6. In crossing streams, whether wading or walking on fallen logs, unfasten the waist loop of pack. Where footing is especially treacherous or water particularly swift, it is a good idea to set up a hand line and, if footing is tricky, transfer the gear via Tyrolean.
7. Make camp, emergency or otherwise, before dark. Camp near water if possible.
8. Falling rock is a serious hazard and demands every caution. Innocent-looking slopes and steep gullies can become bowling alleys by the action of weather or people.

9. Avoid steep snow slopes, especially those that end in rocks or cliffs.
10. Do not undertake to climb mountains unless you are in the company of qualified leaders.
11. Know your leader before you start. He is responsible for the discipline and welfare of the group. Pick a leader if necessary.

If you become lost, it is generally best to stay put. Don't get excited -- just start on the three essentials for survival:

HEAT	A warming fire with smoke for a signal
SHELTER	From wind, rain and snow; keep dry
WATER	To sustain life

Remember, pace is the most difficult thing for beginning hikers and climbers to learn. Hiking is not a sport like football or baseball where one can "put out" for two or three hours and rest. Hiking is a way of walking which must be gauged to last all day if need be. Just about every beginner walks too fast and stops too often. Efficient woodcraft and camping are directly connected with efficient travel. Fifteen extra minutes breaking camp is another half mile lost.

Any trip into the high country is an opportunity to learn: map and compass, ecology, fire-making and cooking, edible plants, route finding, animal habits, and appreciation for wilderness as it relates to the quality of life.

### NAVIGATION

Navigation is not simply a facility with map and compass. Navigation encompasses the sum total of information at your disposal which may be of help in finding your way or a specific destination. Depending upon the situation, navigation might mean sighting on stars, using a compass, or altimeter, finding prominent landmarks, following watershed drainages, and ridges, or simply following trails, signs and markers. No single method is useful in all situations, usually several of the above-mentioned techniques will be necessary at any given time.

Compass instruction can be quite adequate without being complicated. Students don't need to know about isogonic lines or parallax. If they understand declination, local attraction and bearings; if they can use a compass, with and without a map, then they have everything they need.

The map is, primarily, a miniature picture of the land. If the student understands this, is able to properly orient the map and can interpret all the pertinent map symbols and scales, then he knows enough.

Additional navigation skills can be taught whenever the basics are mastered. Coordination is probably the most useful of these; triangulation and running a course around an obstacle may be of interest. Little tricks often fascinate students:

1. Telling time with a compass.
2. Telling direction with a watch.
3. "Measuring" the width of rivers and the height of trees with compass.
4. Running a compass course.

Most of these students have never heard of section lines, contours and watershed divides, but they will know generally how a compass works. Don't "snow" them with terminology and don't insult them with simple-minded explanations.

Most important, let the students know how you know how to find your way around. When you're on the trail, take time to point out the multitude of small details which you notice and use, but which they may overlook.

### SHELTER CONSTRUCTION

Building a shelter, whether for an emergency bivouac or a leisurely camping trip, will, in many cases, spell the difference between spending a miserable or a comfortable night. The raw materials for natural shelters of many kinds are plentiful in most wilderness areas. Recognizing and using what exists is more intelligent than carrying into the area a manufactured shelter or a preconceived notion of what you will build regardless of the materials at hand or the lay of the land.

On the other hand, with the increased use of wilderness areas, we must be aware of the eventual result if everyone tried to cut a bough bed and build a lean-to, especially in the high country. Minimizing our impact should be of primary importance. There are certainly enough down trees, rocks and deadfall wood to build suitable shelters whenever we want them. Less chopping and a little more looking is in order.

Some details to keep in mind whenever selecting a shelter site are:

1. wind direction
2. sun
3. pests
4. drainage
5. danger snags nearby

With the poncho, a piece of cord and a tree, many kinds of shelters can easily be made. Multiple poncho shelters, with ponchos snapped together along the edges, often work well for two or three students.

NOTE: See Appendix for details about shelter construction.

### PERSONAL PROTECTION

Survival in any situation, whether mountain, desert, sea or arctic, depends for the most part upon maintenance of the bodily status quo. In many cases, this means retaining the body heat; in deserts, it means preventing moisture loss from perspiration, etc. Efficient wilderness travel and living depend upon a knowledge of personal protection.

This includes proper clothing and bodily heat regulation as well as shelter construction. The best shelter around won't protect you if you have allowed your clothes to get soaked through with perspiration. The smart woodsman sheds in time to keep his shirt dry and doesn't wear too much when he's exercising. It may seem like a small thing to pay attention to this much detail and, in city life, it doesn't usually make any difference. But in the woods it makes a good deal of difference; your comfort and safety depend upon your attention to just such details as this. In a sense, you create your body's immediate environment by controlling the type and amount of shelter provided for it.

"The best way to stay warm is not to get hot."

(Geoffrey Winthrop Young)

### WOODSCRAFT

In order to use these mountains in our OUTWARD BOUND program, we must know general woodcraft and be able to teach the techniques to our students. It is the art of taking care of oneself in the wilds.

The techniques of shelter building, firebuilding, and campcraft along with wilderness travel -- these things are woodcraft. Basic instruction, a little common sense, and one's own will-power will keep you safe and comfortable in the wilds.

## EQUIPMENT ISSUED BY SCHOOL TO STUDENT:

Stuff bag	Hard hat
Sleeping bag, 3# dacron tapered	Water bottle
Pack frame, light alloy	Match case
Ensolite pad, 1/4" x 24" x 72" .7/8#	Cord, nylon (pack string)
Poncho	Caps, wool
Ice Axe	Whistles
Sling rope	Goggles, Army surplus
Carabiners	Compass
Mess Kit, and utensils	Knife, Scout or pocket

## EQUIPMENT THAT MAY BE ISSUED TO SOME STUDENTS:

Tarp, nylon or plastic  
 Parkas, nylon  
 Sweaters, wool  
 Boots, climbing; lug sole  
 Socks, wool  
 Crampons

## EQUIPMENT ISSUED TO PATROLS:

Axe - Hudson's Bay  
 Shovel  
 Billies (No. 10 cans), 2 qt. pails, 3 per patrol  
 Fry pans, 12" stamped steel  
 Summit packs, day pack, 3 per patrol  
 First Aid kit  
 Ropes, gold line (7/16" x 120' ... 3/8" x 120' ...)  
 (2 each per patrol)

When selecting an outfit, many things must be considered: The climate, the object of the expedition, the locality, the season, the means of transportation, and any emergencies that might arise. You must not only think of your immediate needs, but you must also think of the future, or sickness and accidents, and especially change in the weather.

FIRECRAFT

The students should be able to build a fire, anytime. This includes in the middle of a storm, or in the middle of the night. If they can find several kinds of tinder, locate dry wood and keep their matches dry, they will probably be able to start fires. With rain, however, and a few other complications like the scarcity of wood in the high country, this will make fire-making a challenge at times.

Just as important is the ability to build fires is the ability to put them out. Besides our obligation to do our own housekeeping in this regard, we also function as a volunteer fire-fighting unit and may be pressed into service at any time. The weather will decide whether we have problems starting fires this summer or problems putting them out.

In general, we should always build fires on mineral soil, clear away from overhanging branches; be aware of the changing humidity and its relation to fire hazard. Flying sparks are a particular hazard to tarps, ponchos, sleeping bags and clothing. Literally hundreds of holes will be burned in school equipment this summer. Perhaps no amount of warning will prevent this, but be sure to make students aware of the problem.

C L I M B I N G



SAFETY PROCEDURESMountain Climbing and Rock Scrambling

In addition to the safety provisions previously outlined for travel in the high country, the following minimum procedures are recommended for mountain climbing and rock scrambling:

1. Leaders are to leave a trip and communication schedule on file with the office. NO SOLO CLIMBING.
2. Hard hats must be worn at all times while rock climbing and scrambling on steep slopes. Chin straps fastened.
3. A sense of awareness of the potential hazards of loose rock must be a part of every training program. Special precautions need to be taken with large groups.
4. Students will be placed so they will not be above or below anyone climbing or rappelling. They must never have their backs to the cliff when waiting below.
5. It is the responsibility of the instructor to see that knots are checked and carabiners locked on each occasion.
6. All students who are belaying must be supervised by an instructor at the top of the cliff, in such a manner that he can render assistance when necessary.
7. All belayers must be anchored.
8. Test all hand and foot holds carefully.
9. All pitons must be tested on each climb.
10. A patrol first aid kit must be carried by each instructor or staff member with the group. Instruction should be given in the use of the materials in the first aid kit. Drugs should be clearly labeled and the school's first aid manual should be included.
11. A climbing rope should be carried by each party hiking or climbing in the mountains. Examine it frequently.
12. The school's standardized procedures relating to knots, rope handling, belaying and signals will be used at all times.

13. Never under-estimate mountain weather. Fog obscures landmarks; rain makes descent treacherous; wind steals body heat.
14. Lightning is an act of God, but your presence on a mountain during a lightning storm is your own act. If a thunder storm is brewing, get to safer ground. Don't expose yourself on ridges; stay out of caves and away from lone, exposed objects.
15. Glaciered areas require technical skill and special equipment. Dangers are mostly hidden; deep crevasses are often covered with late snow; sun will weaken these bridges; burn the skin and blind the eyes. Steep snow may avalanche; cornices may break off.
16. Most problems develop on the descent. Fatigue is often overlooked. It can lower body resistance, fog the mind and weaken the legs. Being hungry, cold and wet also takes its toll. Keep together. Move carefully.
17. ASSUME NOTHING.

The following knots should be learned well by everyone: Bowline, Bowline on a coil; Figure 8; Overhand; Clove Hitch.

The following are helpful: Tautline; Belayer's Knot; Prussik; Fisherman's Knot; Sheet Bend.

---

#### FIRST AID:

Treat bleeding and shock. Refer to your school first aid card if necessary. Follow established communication procedures.

#### SAFETY OF THE PARTY:

The state of psychological shock that exists after an accident must be appreciated. Additional caution must be exercised for the safety of the whole party.

Specific rules and regulations regarding safety cannot possibly be spelled out to cover all conditions or emergencies. Foresight and calm, good judgment are the most important ingredients of any safety program.

CLIMBING SIGNALS

These signals are all that are needed for the type of rock climbing done at the Northwest OUTWARD BOUND School.

ON BELAY:	Called by the belayer to let the climber know that he is tied in and ready to protect him on the climb.
UP ROPE:	Called out by the climber if there is loose rope he wants pulled up before he begins to climb.
CLIMBING:	Called out by the climber to warn his belayer when he is ready to climb.
TENSION:	Called by the climber when he wants the rope particularly tight so that he can put his weight on it.
SLACK:	Called by the climber when the rope is too tight and he wants it loosened a little, or when he needs to go back down a little.
FALLING:	Called by the climber to give the belayer warning that he is falling, and to be prepared to hold his full weight.
ROCK:	Shouted frantically to warn those below to take protection from a falling rock.
ALL CLEAR:	Called by a person at the end of a rappel to tell those above that he has finished the rappel and is safely out of the way so they can come down.
OFF BELAY:	Called by the climber at the end of the climb to tell the belayer he is safe and no longer needs protection.
BELAY IS OFF:	Called by the belayer to tell the climber he is no longer protected.

HIGH-ALTITUDE EMERGENCIESFIRST AID

## ALTITUDE SICKNESS:

Cause: Rapid exposure of unacclimatized persons to high altitude, resulting in poor oxygenization of the blood.

## Symptoms:

1. Headache, lassitude, lack of appetite, shortness of breath
2. Vomiting may occur
3. Insomnia sometimes noted
4. Defective judgment, unreasonable actions

## First Aid:

1. Administration of pure oxygen
2. Evacuate to lower altitude

## Prevention:

1. Gradual acclimatization
2. High carbohydrate diet
3. Adequate rest; avoid alcohol, smoking

## References:

- A. Mountaineering Medicine, p. 29.
- B. Emergency Medical Guide, p. 293.

## DEHYDRATION:

Cause: With every increase in elevation there is an increase in evaporation from the skin. This, combined with increased difficulty in finding sufficient water at higher elevations often prevents victim from securing an adequate supply. At high altitudes and/or in cold weather minimum intake should be two quarts a day.

## Symptoms:

1. Lassitude
2. Headache
3. Defective judgment

## First Aid:

Drink large quantities of liquids.

## Prevention:

Drink plenty of liquids.

### HYPERVENTILATION:

The process whereby a person "blows" off carbon dioxide too rapidly, thereby upsetting the chemical balance of his body.

#### Symptoms:

1. A state of anxiety usually underlies this condition
2. Victim complains of lack of air
3. Respirations are long and deep
4. Tightness in chest, numbness or tingling in fingers, chill in hands, feet
5. Headache

#### First Aid:

1. Place a paper bag over victim's nose and mouth so he re-breathes exhaled carbon dioxide. This will restore chemical balance.
2. Reassure victim

#### Reference:

- A. "Super Emergencies," Summit Magazine, October, 1960.

### HIGH-ALTITUDE PULMONARY EDEMA:

A condition occurring generally above 9000 feet. Leakage of fluid and blood from small blood vessels of the lung fills the air sacs (alveoli) and prevents oxygen from reaching the blood. Without prompt treatment, victim may die within 6 to 48 hours.

#### Symptoms:

1. Shortness of breath
2. Dry, persistent cough, gurgling sounds in chest, blood-tinged sputum
3. Weakness
4. Heartbeat, often over 120/min
5. Headache, nausea, vomiting may occur
6. Pulse often very weak
7. Lips or fingernails may turn blue
8. Unconsciousness may occur

#### First Aid:

1. Immediate evacuation to lower altitude
2. Administer oxygen during descent if possible. Initial dose: 4 liters per minute, then 2 liters per minute
3. Rest

#### Prevention:

1. Gradual acclimatization with moderate amount of physical exercise
2. Carry emergency oxygen when mountaineering for long periods at high altitudes

## References:

- A. "Treatment and Prevention of High-Altitude Pulmonary Edema," American Alpine Journal, 1965, p. 363-372.
- B. Mountaineering Medicine, 1965, p. 30.

## SNOW BLINDNESS:

Temporary (occasionally permanent) impairment of vision caused by failure to use dark glasses on snow or light-colored rock.

## Symptoms:

1. Eyes ache severely and are bloodshot
2. Vision impaired
3. Eyes extremely sensitive to light

## First Aid:

1. Apply cool, wet compresses
2. Wear two pairs of dark glasses
3. In severe cases, cover eyes completely and lead victim out by hand
4. Holocaine Hydrochloride Eye Ointment relieves pain but doesn't improve vision
5. Recovery may take from 2 to 3 days

## Prevention:

1. Wear dark glasses with side protection or goggles where there is brilliant sunshine on snow or light-colored rock.

## Reference:

- A. Mountaineering Medicine, p. 26.

## ELECTRIC SHOCK - LIGHTNING:

Electric shock may paralyze the breathing center in the brain so that the heart stops completely or is thrown into a state of ineffective twitching.

Mountain Storms: Lightning kills many people on exposed ridges and under lone trees. Electricity leakage may include St. Elmo's Fire, buzzing in rocks and in metal.

## Procedures in a storm:

1. Get off exposed ridges
2. Stay away from towers and lone trees
3. Squat rather than sit on the ground if caught on a high ridge so that the ground current will run only through your feet

## Symptoms of Electric Shock:

1. Unconsciousness
2. Absence of breathing
3. Skin burns at points of entrance and exit of current

## First Aid:

1. Artificial mouth-to-mouth respiration
2. External heart massage if necessary
3. If conscious, victim must be kept quiet
4. Watch for outbursts, unexpected hysterical behavior.  
Guard against victim injuring himself further.

## Reference:

- A. Lightning Hazards to Mountaineers

## EXPOSURE:

Severe chilling of the body surface leading to a progressive fall of body temperature with the risk of death.

Cause: A combination of prolonged fatigue, cold, wetness, and anxiety or mental stress.

## Symptoms:

1. Unexpected and unreasonable behavior accompanied by complaints of being cold and tired
2. Physical and mental lethargy. Failure to respond to questions.
3. Some failure of vision
4. Some slurring of speech
5. Sudden fits of shivering
6. Violent outbursts of energy and language
7. Falling down
8. Extreme ashen pallor
9. Body temp. fall below 98.6

## Immediate treatment:

1. Avoid causing a sudden surge of blood to the skin. Do not use hot water bottles, rubbing alcohol intake.
2. Prevent further heat loss by insulating the body
  - a. Get victim in sleeping bag. Insulate from ground.
  - b. Place a warm companion next to victim.
  - c. Place tent or tarp over bag.
3. If conscious, victim should have warm (not hot) drinks and easily digested food
4. Treat victim as stretcher case even if there is apparent recovery. Carry him out.

## Treatment upon reaching Civilization:

1. Rewarm victim rapidly in a hot bath not to exceed 110 . Use thermometer.
2. After body temperature is normal, remove victim to warm room 70 .

## Prevention:

1. Watch party for signs of exhaustion
2. Wear waterproof jackets and windproof over-trousers in cold, wet, windy weather.
3. Eat plenty of nourishing food. Carry sweets in pocket for munching on the trail.

## Reference:

- A. "Exposure," The Climber, October, 1963.

MOUNTAIN RESCUE

NWOBS is an official mountain rescue support unit affiliated with Mountain Rescue and Safety Council of Oregon, MRSCO. We have enough rescue equipment, set aside for that specific purpose, to effect a rescue of any mountain climbing accident. Keeping this equipment serviceable and accessible will take the cooperative effort of all staff. Familiarize yourself with what we have, where it is and how to use it. Know, throughout the course, the procedures for organizing a rescue, securing the required equipment and mobilizing the needed manpower. Protect the rescue equipment from tampering or borrowing; NOTHING justifies appropriation of rescue equipment for general use. Keep radio contact as specified by your Chief Instructor. Use standard call procedures in case of faulty reception and keep spare batteries for your radio. If you do not know basic mountaineering rescue techniques, find out, either from someone or from W. Mariner's book, Mountain Rescue Techniques.

You should at least know:

1. Lowering procedure for using brake bar or carabiner brake.
2. Raising procedure using pulley arrangement.
3. How to improvise a stretcher from a climbing rope.
4. How to set up an equalizing anchor.
5. How to rig a stokes litter for cliff evacuation.

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The following equipment will be specified and set aside as Rescue Equipment:

4 Stokes Litter	10 pitons
2 full leg plastic splint	2 piton hammers
2 200' 7/16 gold line ropes	6 ice screws
3 120' 7/16 gold line ropes	2 6 x 8 coated nylon tarps
4 brake bars	2 sleeping bags
4 pulleys	2 hard hats

Complete kit for 4 man days including food, clothing, compass, knife, Bluet stove, cartridge, candles, pencil and notebook.  
Complete first aid kit.



The members of any rescue team must be equipped with their own gear. Rescue of others is not feasible if the rescuers cannot take care of themselves. This may include a bivouac, depending upon the situation. Remember -- any situation requiring a rescue is a situation requiring extra caution from every standpoint. A tired, strung-out, or ill-equipped rescue team is no help to a victim. You are the expert, but your team is still a group of amateurs; all of the problems of leadership still exist along with the unique challenge of a rescue. Your chief consideration is the safety of your students; a rescue is dangerous enough without taking extra chances.

References:

Manning, Harvey, Mountaineering -- The Freedom of the Hills, The Mountaineers, Seattle, 1960.

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Sierra Club, Basic Mountaineering, 1961.

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Wexler, Arnold, Belaying the Leader.

Blackshaw, Alan, Mountaineering, Penguin handbook, 1965.

S O L O

With the poncho, a piece of cord and a tree, many kinds of shelters can easily be made. Multiple poncho shelters, with ponchos snapped together along the edges, often work well for two or three students.

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C L I M B I N G

SAFETY PROCEDURESMountain Climbing and Rock Scrambling

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16. Most problems develop on the descent. Fatigue is often overlooked. It can lower body resistance, fog the mind and weaken the legs. Being hungry, cold and wet also takes its toll. Keep together. Move carefully.
17. ASSUME NOTHING.

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The following are helpful: Tautline; Belayer's Knot; Frussik; Fisherman's Knot; Sheet Bend.

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#### FIRST AID:

Treat bleeding and shock. Refer to your school first aid card if necessary. Follow established communication procedures.

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Specific rules and regulations regarding safety cannot possibly be spelled out to cover all conditions or emergencies. Foresight and calm, good judgment are the most important ingredients of any safety program.



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These signals are all that are needed for the type of rock climbing done at the Northwest OUTWARD BOUND School.

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- OFF BELAY: Called by the climber at the end of the climb to tell the belayer he is safe and no longer needs protection.
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HIGH-ALTITUDE EMERGENCIESFIRST AID

## ALTITUDE SICKNESS:

Cause: Rapid exposure of unacclimatized persons to high altitude, resulting in poor oxygenization of the blood.

## Symptoms:

1. Headache, lassitude, lack of appetite, shortness of breath
2. Vomiting may occur
3. Insomnia sometimes noted
4. Defective judgment, unreasonable actions

## First Aid:

1. Administration of pure oxygen
2. Evacuate to lower altitude

## Prevention:

1. Gradual acclimatization
2. High carbohydrate diet
3. Adequate rest; avoid alcohol, smoking

## References:

- A. Mountaineering Medicine, p. 29.
- B. Emergency Medical Guide, p. 293.

## DEHYDRATION:

Cause: With every increase in elevation there is an increase in evaporation from the skin. This, combined with increased difficulty in finding sufficient water at higher elevations often prevents victim from securing an adequate supply. At high altitudes and/or in cold weather minimum intake should be two quarts a day.

## Symptoms:

1. Lassitude
2. Headache
3. Defective judgment

## First Aid:

Drink large quantities of liquids.

## Prevention:

Drink plenty of liquids.

#### HYPERVENTILATION:

The process whereby a person "blows" off carbon dioxide too rapidly, thereby upsetting the chemical balance of his body.

#### Symptoms:

1. A state of anxiety usually underlies this condition
2. Victim complains of lack of air
3. Respirations are long and deep
4. Tightness in chest, numbness or tingling in fingers, chill in hands, feet
5. Headache

#### First Aid:

1. Place a paper bag over victim's nose and mouth so he re-breathes exhaled carbon dioxide. This will restore chemical balance.
2. Reassure victim

#### Reference:

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A condition occurring generally above 9000 feet. Leakage of fluid and blood from small blood vessels of the lung fills the air sacs (alveoli) and prevents oxygen from reaching the blood. Without prompt treatment, victim may die within 6 to 48 hours.

#### Symptoms:

1. Shortness of breath
2. Dry, persistent cough, gurgling sounds in chest, blood-tinged sputum
3. Weakness
4. Heartbeat, often over 120/min
5. Headache, nausea, vomiting may occur
6. Pulse often very weak
7. Lips or fingernails may turn blue
8. Unconsciousness may occur

#### First Aid:

1. Immediate evacuation to lower altitude
2. Administer oxygen during descent if possible. Initial dose: 4 liters per minute, then 2 liters per minute
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## References:

- A. "Treatment and Prevention of High-Altitude Pulmonary Edema," American Alpine Journal, 1965, p. 363-372.
- B. Mountaineering Medicine, 1965, p. 30.

## SNOW BLINDNESS:

Temporary (occasionally permanent) impairment of vision caused by failure to use dark glasses on snow or light-colored rock.

## Symptoms:

1. Eyes ache severely and are bloodshot
2. Vision impaired
3. Eyes extremely sensitive to light

## First Aid:

1. Apply cool, wet compresses
2. Wear two pairs of dark glasses
3. In severe cases, cover eyes completely and lead victim out by hand
4. Holocaine Hydrochloride Eye Ointment relieves pain but doesn't improve vision
5. Recovery may take from 2 to 3 days

## Prevention:

1. Wear dark glasses with side protection or goggles where there is brilliant sunshine on snow or light-colored rock.

## Reference:

- A. Mountaineering Medicine, p. 26.

## ELECTRIC SHOCK - LIGHTNING:

Electric shock may paralyze the breathing center in the brain so that the heart stops completely or is thrown into a state of ineffective twitching.

Mountain Storms: Lightning kills many people on exposed ridges and under lone trees. Electricity leakage may include St. Elmo's Fire, buzzing in rocks and in metal.

## Procedures in a storm:

1. Get off exposed ridges
2. Stay away from towers and lone trees
3. Squat rather than sit on the ground if caught on a high ridge so that the ground current will run only through your feet

## Symptoms of Electric Shock:

1. Unconsciousness
2. Absence of breathing
3. Skin burns at points of entrance and exit of current

## First Aid:

1. Artificial mouth-to-mouth respiration
2. External heart massage if necessary
3. If conscious, victim must be kept quiet
4. Watch for outbursts, unexpected hysterical behavior.  
Guard against victim injuring himself further.

## Reference:

- A. Lightning Hazards to Mountaineers

## EXPOSURE:

Severe chilling of the body surface leading to a progressive fall of body temperature with the risk of death.

Cause: A combination of prolonged fatigue, cold, wetness, and anxiety or mental stress.

## Symptoms:

1. Unexpected and unreasonable behavior accompanied by complaints of being cold and tired
2. Physical and mental lethargy. Failure to respond to questions.
3. Some failure of vision
4. Some slurring of speech
5. Sudden fits of shivering
6. Violent outbursts of energy and language
7. Falling down
8. Extreme ashen pallor
9. Body temp. fall below 98.6

## Immediate treatment:

1. Avoid causing a sudden surge of blood to the skin. Do not use hot water bottles, rubbing alcohol intake.
2. Prevent further heat loss by insulating the body
  - a. Get victim in sleeping bag. Insulate from ground.
  - b. Place a warm companion next to victim.
  - c. Place tent or tarp over bag.
3. If conscious, victim should have warm (not hot) drinks and easily digested food
4. Treat victim as stretcher case even if there is apparent recovery. Carry him out.

## Treatment upon reaching Civilization:

1. Rewarm victim rapidly in a hot bath not to exceed 110 .  
Use thermometer.
2. After body temperature is normal, remove victim to warm room 70 .

## Prevention:

1. Watch party for signs of exhaustion
2. Wear waterproof jackets and windproof over-trousers in cold, wet, windy weather.
3. Eat plenty of nourishing food. Carry sweets in pocket for munching on the trail.

## Reference:

- A. "Exposure," The Climber, October, 1963.

MOUNTAIN RESCUE

NWOBS is an official mountain rescue support unit affiliated with Mountain Rescue and Safety Council of Oregon, MRSCO. We have enough rescue equipment, set aside for that specific purpose, to effect a rescue of any mountain climbing accident. Keeping this equipment serviceable and accessible will take the cooperative effort of all staff. Familiarize yourself with what we have, where it is and how to use it. Know, throughout the course, the procedures for organizing a rescue, securing the required equipment and mobilizing the needed manpower. Protect the rescue equipment from tampering or borrowing; NOTHING justifies appropriation of rescue equipment for general use. Keep radio contact as specified by your Chief Instructor. Use standard call procedures in case of faulty reception and keep spare batteries for your radio. If you do not know basic mountaineering rescue techniques, find out, either from someone or from W. Mariner's book, Mountain Rescue Techniques.

You should at least know:

1. Lowering procedure for using brake bar or carabiner brake.
2. Raising procedure using pulley arrangement.
3. How to improvise a stretcher from a climbing rope.
4. How to set up an equalizing anchor.
5. How to rig a stokes litter fro cliff evacuation.

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The following equipment will be specified and set aside as Rescue Equipment:

4 Stokes Litter	10 pitons
2 full leg plastic splint	2 piton hammers
2 200' 7/16 gold line ropes	6 ice screws
3 120' 7/16 gold line ropes	2 6 x 8 coated nylon tarps
4 brake bars	2 sleeping bags
4 pulleys	2 hard hats

Complete kit for 4 man days including food, clothing, compass, knife, Bluet stove, cartridge, candles, pencil and notebook.  
Complete first aid kit.

The members of any rescue team must be equipped with their own gear. Rescue of others is not feasible if the rescuers cannot take care of themselves. This may include a bivouac, depending upon the situation. Remember -- any situation requiring a rescue is a situation requiring extra caution from every standpoint. A tired, strung-out, or ill-equipped rescue team is no help to a victim. You are the expert, but your team is still a group of amateurs; all of the problems of leadership still exist along with the unique challenge of a rescue. Your chief consideration is the safety of your students; a rescue is dangerous enough without taking extra chances.

References:

Manning, Harvey, Mountaineering -- The Freedom of the Hills, The Mountaineers, Seattle, 1960.

Mariner, Wastl, Mountain Rescue Techniques, 1963.

Sierra Club, Basic Mountaineering, 1961.

Wexler, Arnold, The Theory of Belaying, 1950.

Wexler, Arnold, Belaying the Leader.

Blackshaw, Alan, Mountaineering, Penguin handbook, 1965.

S O L O



## SOLO

### I. INTRODUCTION

Solo is not meant to be a miserable experience. Properly handled, it can be one of the most significant experiences of your life. Improperly handled, it can be extremely uncomfortable. Everything depends on your approach to the Solo, and on your preparation for it, the energy and imagination, and above all, the common sense you bring to adapting to life in the natural world.

We hope you will use your equipment, your training, your forethought, patience and versatility to get a deeper understanding of yourself and come to appreciate the intricate world of weather, of trees and mountains, insects and plants, birds and fish upon which we all depend and which will be yours for three and a half days.

Plan what you would do if you had to spend a week by yourself. Remember you are alone, that your primary concern is to return as well as you went out. Therefore, some activities which are possible with companions should be avoided without them. This is not cowardice but common sense and recognition of the obligation incumbent on everyone to cause no difficulty for others to help those in trouble. Do not become a casualty. There is enough to do in learning the geography and vegetation of your area and in working out the simplest and most efficient living scheme for yourself to keep you busy the whole time you are out.

Patience and versatility are basic for any sensible life in the woods. You must accept the fact that you live in an environment which, unlike a city or town, is not designed for you if you make urban demands upon it. However, if you observe what it is and has to offer and adapt your life to its circumstances intelligently, you can live comfortably for an indefinite length of time. You must discover what is possible in terms of the terrain and the simplest and most efficient pattern of life it permits. There is no virtue in being uncomfortable because you do not take the trouble to find out how to be comfortable. Once you accept the wilderness for what it is, you can begin to find your place in it. Then it is full of resources which you can use.

Your powers of observation are probably the most necessary safety aid that exists. Every bit of lore you can acquire for reading the inter-related signs of weather, drainage, vegetation, the position of land marks, the behavior of animals may be of use. You will find much to think about and three and half days may even seem too short.

### II. SOLO EQUIPMENT

- A. Pack
- B. Nylon shelter sheet, or poncho
- C. Snare wire and line

- D. Six matches or flint
- E. Knife
- F. Water bottle
- G. Whistle
- H. Notebook and pencil (Morning Readings, optional)
- I. Sleeping bag (optional)
- J. Salt and one 10# can

YOU MAY NOT TAKE ANYTHING ELSE.

III. SHELTERS

Pick the best possible site; make an adequate shelter and leave no evidence of it when you come in. Get plenty of rest.

IV. FIRE

Build only the fire you need. Be extremely careful with fire. In gathering fuel, remember you may get only one chance to get a fire started.

V. SANITATION

Camp in the wilderness spirit. Don't pollute or litter the environment. Dig a latrine and use it. Leave your area as clean and wild as you found it.

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THE STUDENT SOLO:

Make certain that students understand the boundaries of their solo area and the limitations on travel. They should know where you will be camped. They should thoroughly understand the purpose of the solo and the place of importance it holds in our program. If a student decides he can't do it, it is most important that he not spoil someone else's solo. Ideally, he will be able to get to the instructor's camp without disturbing anyone. Several students last year were not able to complete their solo because some other student, who had decided to flick it in, did not realize the implications of stopping to visit someone else.

PSYCHOLOGICAL ASPECTS OF SURVIVAL

(This was condensed from a memo of January, 1954, from the United States Air Force.)

Learning in survival training differs from learning in other kinds of training situations. Three differences are important. The first involves the peculiar nature of resistance to learning found among many trainees. Many react to survival training as though it were the real thing and find it a very threatening experience. They experience the same fear and panic they would if it were real. Others who find it just as threatening show their resistance by denying the need for the training by indifference, aggressive complaints about the training, the instructors, the school, etc., or by trying to get out of the training. Second, the skills must be overlearned. The lessons learned must be remembered over a period of time and in stress or emergency situations. Third, it is heavily loaded with emotional overtones. A response or pattern of behavior has to be learned by one's whole being so that one responds in the proper fashion in an emergency almost automatically, seemingly "without thinking."

The confidence-giving value of proper equipment is important, too. The continued development of rescue procedures also builds confidence.

The role that conscious, well-planned leadership and organization plays in modifying fear cannot be ignored. Since fear and panic are such important factors in survival, survival information should serve to minimize fear and prevent panic. It has been demonstrated that survival information contributes to feelings of confidence in one's ability to survive.

Men must feel that they have come through real danger but have escaped unharmed. Skillful instruction can do much to help trainees to face and overcome their fears as they are encountered. You need not go out of your way to teach important lessons concerning psychological reactions to pain, cold, thirst, hunger, fatigue, boredom, or loneliness. You may not have to contend with all of these, but you can count on enough to have all you can handle. The important thing that you as an instructor must remember is that individuals don't automatically learn from their experiences. Take time out to let them examine the situation themselves and get in the habit of learning from their experiences.

When the trainee feels called upon to defend himself and perhaps demonstrate that his action was justified under the conditions, his resistance to learning would likely result. If instead, the offender could take part in a group evaluation of the project and group decision regarding its success, he would be in a better position to accept and incorporate the necessary knowledge.

Even the man who lacks ingenuity and resourcefulness can be taught to improvise useful articles and equipment from what he finds at hand to make living more comfortable. The instructor may have to point out the materials and explain to him its potentialities, but in this way the instructor at least gets him started learning. He will be able to live off the land even though he may basically be no more ingenious than before the training.

The enthusiasm of the instructor will be contagious. The challenging aspects of the experience can be emphasized. Unless the instructor is himself a dogmatic person, he will find many opportunities to demonstrate that there is more than one solution to most problems of survival.

Some childhood anxieties such as fear of steep places, fear of the dark, food aversions, etc., may be reactivated during survival training. The instructor may be able to help by explaining that once there was a reason for the anxieties but now the chances of overcoming some of these handicapping anxieties are good. If any change in personality occurs, the trainee himself must make the change.

REPORTS AND JOURNALS

#### STUDENT JOURNALS:

Encourage each student to keep a journal, or diary, throughout the course to give him a day-to-day record of his thoughts and impressions, ideals and accomplishments. He will find it useful in writing his course impressions at the end of the course and you may get a new slant on a particular boy, through his journal, if he is willing to let you see it. Often they want to show you, sometimes they want to keep it private; in any case, they should keep a journal, if only for self-appraisal.

#### INTERVIEWS:

You should get to know each member of your patrol as well as you can, the earlier the better. This personal contact and concern is one of the main ingredients of OUTWARD BOUND and the key to any success we may have. You ought to have at least three personal interviews with each student. The first day, get to know his background and reasons for coming to OUTWARD BOUND; his personal goals and what he expects from OUTWARD BOUND. The second interview, toward the middle of the course, preferably right after the solo, is to give him some idea of how you think he is progressing and where he could improve. The third, on the last day, is to let him know just what kind of report he will be given. If your relationship has been a good one, there should be no surprises. This is a recommended minimal -- there will be numerous other opportunities to talk to the boys alone; each boy's demands will be unique as will his tolerance level. Above all, keep it informal. Cast yourself as a drill sergeant or an infallible counselor-type and the guys will get up tight and never say anything except the standard baloney they think you want them to say. Allow yourself to get moralistic or vindictive and they will see you as just another cog in "the establishment" which they are up against everywhere else and which they habitually resist.

#### STUDENT LEADERSHIP:

The varied activities of OUTWARD BOUND will give almost every student a chance to shine. Some will be good cooks, some may be good with map and compass, some will be more agile and adaptable than others. They should select a patrol leader, preferably not before they get to know each other and there may be some re-shuffling during the course. You may want to assign some responsibility to various individuals for various reasons (this is a good way to observe a particularly mediocre student). Good student leadership will help you immeasurably in your job.

#### STUDENT AWARDS:

Every student who successfully completes the OUTWARD BOUND course is awarded a certificate and a lapel pin. He is also eligible to purchase official shoulder patches and OUTWARD BOUND ties. Successful completion

of the course is something you must decide for each student. There will be a staff meeting towards the end of the course to discuss whether there are any students who will not receive the pin. The training condition pledge:

"It is a training condition of OUTWARD BOUND that you abstain from the use of alcohol, drugs and tobacco, and that you live in good fellowship with the rest of the community for the duration of your course here. Your signature is your pledge on your honor as a gentleman to observe these conditions."

Which the student signs at the beginning and at the end of the course, along with the general criterion, "Has the student tried," "Has he made a genuine effort and improvement compared to his starting point," are the main standards by which he will be judged. All we ask is that every student give his best at all times; there are no minimum objective standards in any particular activity. On the final evening, there is an awards ceremony and each student comes forward to sign the training conditions book and receive his award. His signature is a public statement that he has kept his pledge.

#### STUDENT REPORTS:

The Student Report, which goes to the student's parents and/or sponsor, is the most important tangible fruit of your labors. It represents everything you know about a student, and may have far-reaching effects for him. This report lingers on as our picture of the student and as a reference for potential colleges, businesses, etc. The reports are responsible for a good deal of the continuing support from our sponsors. The report, then, must be carefully done. It must represent your accurate and sensitive observations, and your considered judgments. It must be specific and convincing -- in short, you must know the student and you must be able to communicate this knowledge. How does he react to challenge, hardship, hazard? In evaluating a student, you must be able to judge his personal growth and achievement relative to where he started. You must consider his unique qualities. Make an evaluation of his behavior supported by specific incidents.

To facilitate report writing, each instructor is strongly advised to keep a journal in which, day by day, impressions and incidents can be noted. Each of the major activities of the program (solo, expedition, ropes course, climbing, final, etc.) should yield notes for each student. Even students who don't do anything outstanding must be accurately portrayed, taking part in some fashion. The humblest and most mediocre student will do things during the course which will make all the different in his report, be it a barely perceptible extra effort, a moment of compassion or an uncharacteristic act of magnanimity. Capture these and your reports will shine. Don't write a report for any student

which could apply without change to anyone else. This is not fair to the student and it indicates that you aren't doing your job. Some students are easy to write about, some not so easy -- a journal will help you decide where the gaps are going to be and who needs more careful observation.

#### DISCIPLINE:

So far as possible, the discipline at the Northwest OUTWARD BOUND School is self-discipline, and students are placed in situations where they see the need for this. Faculty-student relationships are built largely on mutual respect.

However, the nature of the activities is such that students must know who is in charge. This is really a margin of safety. We have found that just the right amount of respect for authority is engendered if staff members are called by their surname or "Sir."



A P P E N D I X

MISCELLANEOUS NOTES

The theory and practice of belaying and ropework can be effectively taught on the trail or in camp. Demonstrate the principle by putting a piece of rope around a tree, holding it down with the thumb and inviting students to pull on the other end.

A night hike is an excellent change-of-pace, memorable as well as instructional.

Regardless of the long-range aim or motivation of the school or the instructor, we must ultimately deal in concrete, basic examples. The lesson must be a clear and "emotionally worthwhile" objective. It has been correctly observed that "A kid learns what he has to." Theories about compass work will put a student to sleep, but put his lunch at the end of a compass course and let him find it; he'll learn fast.

Students will absorb a fair amount of information after a failure, but not before.

Capture his interest -- make it relevant. Concrete examples must mask the theoretic principles. Demonstration, participation, imaginative relevant make-believe -- kids like games!

Good practical problems, which require initiative and insight, often can be fabricated without much trouble in the field.

(COPY)

HERBERT J. GOODWIN, Inc.  
GENERAL INSURANCE

30 Vesey Street  
New York, N.Y. 10007  
May 15, 1968

Mr. William Byrd, Director  
Northwest Outward Bound School  
1609 Oak Street  
Eugene, Oregon

Dear Mr. Byrd:

We are advised of an interest in providing Accident insurance for Seasonal employees. The Seasonal employees are defined as those hired while the school is in operation and not insured by the Employees' Group Insurance.

The insurance benefits are as follows:

Accidental Death,	\$ 25,000.00
Loss of hand, foot or sight,	12,500.00
Blanket Medical expense,	5,000.00

Blanket medical expense provides coverage for expenses resulting from an accident requiring treatment by a legally qualified physician or surgeon, confinement in a legally constituted hospital, trained nurse, x-ray, use of an ambulance. With respect to this benefit, only, there is an exclusion for duplication of Workmens Compensation benefits. The premium would not exceed \$45.00 per employee for the season.

Should you be interested in providing the insurance, a list of names of those to be insured, should be forwarded to this office.

Please advise of any further information you may require.

Sincerely yours,

/s/ Herbert J. Goodwin

Herbert J. Goodwin, Inc.

AGS: