

**NORTHERN TIER NATIONAL
HIGH ADVENTURE
Boy Scouts of America**

Voyageur Handbook To Adventure



PURPOSE OF THE BOY SCOUTS OF AMERICA

Its purpose is to promote, through cooperation with other agencies, the ability of youth to do things for themselves and others, and to teach them patriotism, courage, self-reliance and kindred virtues. In achieving this purpose, emphasis is placed upon its educational program and the oaths, promises and codes for character development, citizenship training, and mental and physical fitness.



To load up on the best in Northern Tier
memorabilia and outdoor gear,
visit www.ntier.org and click on:
The Outfitter
for Northern Tier's Trading Post Catalog!

This book belongs to:

Program Base Attending _____

Crew # _____

Personal Equipment Check List
can be found in the Appendix A11-13
Also center of book

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PRONUNCIATION GUIDE

Ely	<u>Ee</u> lee
Atikokan	At i <u>coke</u> can
Bissett	Beh <u>set</u>
Quetico	<u>Quet</u> i ko
Atikaki	At i <u>kak</u> ee
Okpik	<u>Ook</u> pick





NORTHERN TIER DELIVERS WILDERNESS ADVENTURE!

Welcome to the Northern Tier National High Adventure Bases and the great North American Canoe Country. This region is associated with a rich history. The Fur Trade Era, from the late 1600s through the late 1800s, is certainly a colorful piece of this history. Several fur trading companies hired French-Canadian Voyageurs, a hearty breed of adventures, to paddle birch bark canoes and haul trade goods and furs thousands of miles each summer by water and portage trail. This handbook is presented to **you, the modern Voyageur**, as a reference for the history and adventure of the Canoe Country, both past and present.

We hope you are dreaming of your wilderness canoeing adventure and that the thought of traveling the canoe country excites you. Are you ready for the challenge of paddling and portaging your canoe and gear across the same lakes and portages as the historic voyageurs did?

Northern Tier operates three high adventure program bases located in Ely, MN; Atikokan, Ontario; and Bissett, Manitoba. From these facilities millions of acres of sky-blue lakes, meandering rivers, dense boreal forests and wetlands are available for paddling and portaging. The mystique of the wild outdoors and historical features will lure you to explore, to learn and to seek new challenges.

Read and reread this handbook carefully, as it informs you of many details that will help you prepare for your trip. The Personal Equipment Listing is very important for you and your crew. Bring only the items mentioned and try to share as many items as possible amongst other crew members. Remember, you will be carrying everything you bring.

Proper planning before your trip will assure you and your crew of an enjoyable wilderness adventure!

WHAT YOUR FEE INCLUDES

Your fee entitles you to enjoy a wilderness high adventure with the coaching of an extensively trained Interpreter who accompanies your crew. It pays for the support of a highly qualified base staff who issue equipment to your crew including canoes, paddles, nylon tents, dining flies, Granite Gear personal packs, Kondos equipment packs, personal flotation devices, cooking gear and other specialized equipment. Specially packaged, nutritious trail food is provided for the duration of your trek. You are covered with special accident and health insurance from the time you leave home until you return. At Ely your crew will be issued a two-way radio for communication should a trail emergency occur. At Atikokanand Bissett, a satellite phone is issued to allow emergency communication. This modest fee ensures that you and your crew will enjoy a safe, successful trek that is tailored to your desires and skills.

ARE YOU ELIGIBLE?

To participate in the Northern Tier National High Adventure programs, the participant must be **1) at least 13 years of age by the date of arrival, 2) must be a registered Boy Scout, Varsity Scout or Venturing crewmember, AND 3) be classified as a swimmer prior to arrival** (see next section for swimmer classification requirements). In keeping with the policies of the Boy Scouts of America, registration and participation in Northern Tier National High Adventure programs is without regard to race, color, or national origin.

The above are minimum requirements. The National High Adventure Division of the BSA recommends that age, BSA membership or swimming ability not be the only criteria for determining participation on High Adventure expeditions. Maturity, the ability to carry a heavy load (85 lbs.) over steep, muddy, and rugged portages, and camping/canoeing experience should also be considered.

BE A SWIMMER

Everyone in your crew must be classified as a swimmer prior to arriving at the Northern Tier Bases. To qualify as a swimmer, you must be able to swim 100 yards (75 yards any forward stroke and 25 yards in a resting backstroke) and to float motionless for 5 minutes. Your advisor has a form that

must be completed prior to your arrival verifying each and every participant is classified as a swimmer. **Non-swimmers and beginners cannot participate in a wilderness canoe trek.** It is the responsibility of the contingent, unit, and/or crew leader to make sure all participants (including adults) are swimmers as indicated in the Safe Swim Defense Plan. **If you are not a swimmer, be sure to talk to your leader(s).**

It is the policy of the Northern Tier, to wear a PFD and your “wet boots” anytime someone goes swimming. The BSA Safe Swim Defense Plan and Safety Afloat Policy must also be followed when anyone is swimming.

GET A PHYSICAL EXAMINATION AND PARENTAL PERMISSION

Good physical condition is essential. Follow the guidelines in the *Physical Conditioning And Preparation* section and do your best to meet the *Height to Weight* guidelines.

All participants, adult and youth, **MUST** bring a completely and correctly filled out Northern Tier High Adventure *Health and Medical Record* form. A blank *Health and Medical Record Form* has been provided to the adult leader for every participant. A parent or legal guardian must complete the medical history and sign the medical form if you are under age 18. **Every participant, youth and adult, must have a physical examination performed by a physician within 12 months of your expedition starting date.** Give the completed form to your advisor to present to the base check-in officer. If anyone arrives without a medical form signed by a physician and a parent or legal guardian (if you are under 18), your trek may be delayed for a day or longer until you and the crew rectifies the situation.

Be aware that Class 2 summer camp physicals, Class 3 BSA medical forms, and school/sports medical forms are NOT ACCEPTABLE.

ADULT LEADERSHIP

A minimum of two adults (one of which must be at least 21 years of age and registered with the BSA) is required for each crew. Each crew must also have among their adult leadership training in each of the following: CPR, first aid, youth protection training, Safety Afloat, and Safe Swim Defense. Be prepared to


show proof of training in these areas upon check-in at the Northern Tier.


There are no gender restrictions for leadership except that a co-ed Venturing crew must have both male and female leadership 21 years old or older who are both registered with the BSA.


RISK ADVISORY

The Northern Tier National High Adventure Bases have an outstanding safety record. The Boy Scouts of America and the Northern Tier emphasize safety through education and strict adherence to established policies and procedures. The safety of your group is dependent upon your attention to these procedures as well as being physically fit, properly equipped, and trained for the rigors of remote wilderness canoeing.

The Northern Tier and the Boy Scouts of America policies and procedures, if followed, will minimize these risks as much as possible. Parents, leaders, and participants should be advised that despite our best attempts at risk management, it is not possible to remove ALL risk from a wilderness expedition.

 Possible risks include (but are not limited to) motor vehicle accidents; severe weather conditions such as hail, lightning, heat or cold, and high winds; forest fire; medical conditions such as heart attack, appendicitis, hypothermia, severe allergies, and asthma or diabetes related conditions; insect borne diseases including West Nile Virus and Lyme Disease; accidents such as cuts, embedded fish hooks, burns, or falls; risks associated with being on large, cold lakes; and encounters with wildlife.

 Medical evacuations and search and rescue services are coordinated by the Northern Tier in close cooperation with local authorities.

 Please carefully read the information in this Handbook To Adventure and share it with your crew(s), leaders, and parents. If you have any further questions about risk management contact the Northern Tier by fax, e-mail, mail, or phone.

PREPARE FOR HIGH ADVENTURE

Your adventure begins at home. Months before arriving at a Northern Tier National High Adventure Base, you should begin planning and training. A famous explorer once said, "The key to successful planning is living the experience in advance." This guidebook has been developed to help you anticipate what to expect to better prepare yourself and your crew. The more thorough your planning is, the more successful your experience will be.

ORGANIZE YOUR CREW

A well-organized crew quickly accomplishes its chores and has more time to enjoy adventure in the wild outdoors. Your crew should be well organized before your arrival at a Northern Tier National High Adventure Base. If your crew is a chartered unit, this should be easy. If your crew is a provisional council contingent, it is important to schedule several outings to help you get organized. Teamwork, sharing responsibilities, cooperation and initiative are prerequisites to a successful experience.

Your crew may range in size from 6 people to 8 people including adult leaders (in Ely) to as many as 11 including adult advisors (at Atikokan or Bissett). When the Interpreter is added, your crew will total 7 to 9 people in Ely to as many as 12 people in Atikokan or Bissett; 12 people is the maximum consistent with BSA policy on wilderness use. Note: Atikokan crews traveling in the Quetico Provincial Park are limited to a maximum crew size of 9 including adults and Interpreter.

ROLE OF YOUR ADVISOR

Your adult advisor counsels and advises your crew leader and crew. He or she assists if discipline should be required and offers suggestions to help the crew leader. With the assistance of your Interpreter, your advisor is responsible for ensuring the safety and well-being of each crew member. Insofar as possible, the advisor lets the crew leader lead the crew.

ELECT A CREW LEADER

Each crew should elect a crew leader from the youth members before beginning a trek. The crew leader is responsible

for organizing and planning everything the crew does. He or she leads by example. This responsibility requires someone with leadership ability and who is respected by the entire crew. The crew leader must be aware of the interests and capabilities of everyone in the crew.

SELECT YOUR TREK PROGRAM OPTIONS

Before you arrive at a Northern Tier High Adventure Base, examine the program opportunities listed below. You will have the opportunity to do some of the following. Discuss with your other crew members and prioritize your top 5 choices and record on paper to discuss them with your Interpreter.

Fishing - Catch walleye, northern pike, largemouth and small-mouth bass, lake trout, and pan fish. In Bissett, you can also catch channel catfish.

Swimming - Enjoy an invigorating dip in a sky blue lake.

Ecology - Learn about the flora, fauna, soils and geology through your Interpreter.

Observing Wildlife - Spot moose, eagles, osprey, otters, bears and a host of other animals.

Star Gazing - Identify stars, constellations and planets. Maybe you will even see the “Northern Lights.”

Conservation Project - Do an approved conservation project toward the Fifty Miler Award or the S.C.E.N.E. Conservation Award. In Ontario, the “Adopt a Lake Award” can be earned.

Photography - Take photos of your activities and the scenic wonders of Minnesota, Ontario, and/or Manitoba.

Cooking and Baking - Try new techniques and recipes. Learn to bake using the trail oven.

Low Impact Camping - Learn how to camp using Leave No Trace techniques.

Backcountry Navigation - Use map and compass to find your way through the wilderness areas of the Boundary Waters Canoe Wilderness Area, the Quetico Provincial Park, the White Otter Wilderness area, the Turtle River Provincial Park and the Atikaki Wilderness Park.

Historic Trail Award - Follow a route of the North West Company voyageurs and earn this historic trail award.

Float Plane Drop off/Pickup - Bissett crews will start and end their trip with an exciting float plane ride while Atikokan crews can arrange for a float plane to transport the crew one way or both ways. There is a charge for this service. A Float Plane emblem is available for purchase if you and your crew fly in a float plane.

Lake Monitoring Program - Check the water clarity of at least 5 lakes using a Secchi Disk to earn this special program emblem. Emblems are available in Ely and Atikokan.

Geocaching Program - By use of GPS units (or map and compass) crews find virtual caches (historical, natural and geological features) in the wilderness or use a GPS unit to make a “track” of your travels, campsites, portage and landmarks. Special emblems are for sale to crews who meet the qualifications.

Duty to God Emblem - Crews that use the *Northern Passages* booklet, have grace before each meal and attend a religious service at the base qualify for this emblem.

Extra Miler Emblems - The Northern Tier is too big for just the 50-miler award. Emblems are available for crews who challenge themselves to go 75, 100, 125 or even 150 miles. View pictures of the above emblems at www.ntier.org.

TRIP PLANNING

Trip planning is accomplished when you arrive, but you can begin the process prior to your arrival by using the *Northern Tier High Adventure Route Planning Guidebook* sent to your adult leader and by considering these questions and reaching a decision on each:

1. How difficult a trek do you want - leisurely, typical, challenging or super-strenuous? This will depend upon the abilities and stamina of each crew member.
2. Do you want a layover, where you spend two nights in the same campsite? For trips of 8 days or more, at least one layover is recommended.
3. Do any crew members have physical limitations that may affect where you travel or how far you go?
4. Are you planning to work on the Fifty Miler, S.C.E.N.E, Adopt-a-Lake, Historic Trail or other awards listed above?

5. Do you and other members of your crew want to spend time fishing for walleye, pike, bass, and/or lake trout?
6. Do you want to see natural wonders, i.e. waterfalls and cliffs; or historical features, i.e. Indian pictographs, historic sights, fire towers, etc.?
7. Atikokan crews have the option of float plane shuttle. Though more expensive, the flight is a never-to-be-forgotten experience.

GIVE YOUR PARENTS THE EMERGENCY TELEPHONE NUMBER AND YOUR CREW NUMBER

The Northern Tier is not able to contact anyone while they are on their canoe trip. If there is an emergency message, it is best to fax the message to the Northern Tier so that it is delivered to the person upon their return to the Base facility. If necessary to communicate by phone, it is best to call between 9:00 A.M. and 4:00 P.M. weekdays and talk with the year-round office staff. The message will be attached to the crew file for delivery upon the person's return to the Base. Pay telephones are available to the participants at or near all three bases.

Telephone calls for you are restricted to extreme emergencies. The calls (or faxes) to the Ely base come into an emergency station which is monitored 24 hours a day at the administrative center for Northern Tier National High Adventure located near Ely, Minnesota. **Emergency messages MUST include full name and crew number.** Emergency messages will be relayed to the appropriate base and given to the crew upon returning to base. If possible we would prefer emergency messages be faxed to us. At the Canadian bases, only the dedicated emergency satellite phone numbers are monitored 24 hours a day. The phone numbers listed below for Atikokan and Bissett are answered during business hours. If the call is not answered, a message can be called or faxed to the Ely base and we will relay it. **NO COLLECT CALLS WILL BE ACCEPTED!**

These numbers are strictly for emergencies:

Ely Phone: 218-365-4811	Ely Fax: 218-365-3112
Atikokan Phone: 807-597-5822	Atikokan Fax: 807-597-2051
Bissett Phone: 204-277-5261	

MAILING ADDRESSES FOR PARTICIPANTS

ELY BASE - You will be attending the Ely Base if your crew number begins with “E.” Mail for participants attending the Ely Base only should be addressed as shown below. Sending mail is not encouraged as it must be sent shortly after the person has left home to ensure receipt. All mail must have a return address so it can be returned to the sender if the letter arrives after the person has left for home.

Full Name and Crew Number
Northern Tier National High Adventure Base
14798 Moose Lake Road
Ely, MN 55731

ATIKOKAN BASE AND BISSETT BASE - You will be attending the Atikokan or Bissett base if your crew number starts with an “A” or “B.” **Due to the additional time required for mail to get into the Canadian Postal System, sending mail to the Atikokan and Bissett bases is not possible.** Therefore, we do not list the addresses for the Canadian Bases.

REVIEW CAMPER INSURANCE COVERAGE

The Northern Tier fee includes accident and sickness insurance coverage. This applies for your travel to and from the Northern Tier Bases as well as while you are on your canoe trek. This policy is secondary to a family policy. Name and policy number of the family policy should be noted on the Personal Health and Medical Record form. A BSA *Camper's Accident and Sickness Insurance* pamphlet has been sent to the crew advisor.

HARASSMENT

The Northern Tier and the Boy Scouts of America prohibits unwelcome advances, language or behavior that belittles or puts down the members of the opposite sex, racial slurs, chastisement for religious or other beliefs, or any other actions or comments that are derogatory of people. We need to lift people up for the good things they do and refrain from putting them down for mistakes or poor judgement.

SHARPEN YOUR SKILLS

When you are proficient in basic outdoor skills you have more time for real high adventure activities. Read the BSA **Fieldbook** sections titled *Leadership and Trek Preparation* and *Leave No Trace* and use the Venture pamphlet titled **Canoe Camping** available from Northern Tier Trading Post. Here are some basic skills you need to have:

ASSIGN DUTIES

Your crew leader is responsible for assigning duties and specifying what is to be done. Duties should be rotated so that experienced crew members and new crew members work together in pairs. Each member of your crew should know what tasks he or she is to perform. Typical duties to be performed upon arriving at a new campsite are:

Entire crew: Sets up dining fly and stows packs.

Fire Builders: (If using fire.) Gather wood and water, set up fire lay and build fire.

Cooks: Unpack food and pots; prepare meal; heat wash and rinse water.

Dishwashers: Soap pots; clean crew cooking gear.

Balance of crew: Pitch tents and pitch in to help others.

BUILDING A COOKING FIRE

Many methods can be used to light a cooking fire. The most effective ones use the three essentials for fire to best advantage: fuel, oxygen, and heat. Use bone dry tinder to start a fire. Tinder is any small material that will ignite easily, such as pine needles, inner strips of bark from dead branches, weed fluff, and slivers of wood shaved from sticks. Gather plenty of fine twigs, pencil sized kindling, and larger fuel before attempting to light your fire.

Your fire depends upon oxygen, but the point of ignition must be shielded from wind. Use a wooden match or a pocket lighter to start your fire. A few pieces of pitch carefully shaved from the bark of a tree make a great fire starter.

BACKPACKING STOVES

Use of backpacking stoves is encouraged **and may be required during certain fire conditions**. While the forests of

the Canoe Country have plenty of wood, it is scarce near some campsites and hardwood is often not available.

Each Northern Tier program base is able to provide 2 Coleman Peak 1 white gas stoves, fuel and fuel bottles to crews as a part of the gear issued to crews. Crews are welcome to bring their own stoves and fuel bottles if they prefer. Although stove use is required at Bissett, crews may be able to use campfires for cooking at Ely and Atikokan if local fire danger conditions will allow it. If you plan to use stoves, learn to use them properly and safely during your pre-trek training. Here are some stove safety tips:

1. Use stoves only with knowledgeable adult supervision.
2. Never fuel or operate a stove in a tent or building.
3. Keep fuel containers away from lighted stoves and fires. Never use fuel to start a campfire.
4. Check fittings with soapy water before lighting.
5. Place the stove on a level surface to operate it.
6. When lighting a stove, stay to one side - don't hover over it. Light the match, then open the fuel valve wide, light it quickly and adjust the flame to the proper level.
7. Refuel stoves away from open flames. Recap all containers before lighting a stove.
8. Let hot stoves cool before changing cylinders or refilling.
9. Use the proper size pot for the stove -do not overload it.
10. Do not leave a lighted stove unattended.
11. Use approved containers for fuel storage.
12. Carry out empty fuel cartridges and properly dispose of them. Do not crush them or expose them to extreme heat, which may cause them to explode.
13. Perform stove maintenance regularly.

NORTHERN TIER WILDERNESS COOKERY - PRACTICE COOKING

You and your crew are in for a real treat. You will have some of the best trail foods available. You carry all of your

food for the entire trip, so planning is important. The meals we provide are nutritious as well as filling, and if your fishing goes well, delicious fresh fish can be added to your meals.

There is a unique opportunity for specialists at home to help you get ready for your trip. Parents, school programs and local cooks as well as experienced outdoor cooks can all help with learning about meal preparation and baking. Don't wait though - good meal preparation is a "learned" skill. There is no time better to start learning than now.

While you are enjoying that delicious meal, have a pot of water on your fire or stove for dishwashing and rinsing. If you use a wood fire, coat the outside of cooking pots with soap before placing them on the fire to make them easier to clean. Careful rinsing of pots and utensils is crucial - a sanitizing agent such as chlorine bleach must be added to rinse water to reduce the possibility of contamination.

USING MAP AND COMPASS

The lakes and waterways in the wilderness areas you will be paddling do not have signs to guide you. It is important to learn to become highly proficient at using a map and compass. You should be able to pinpoint your location at all times and should know how to follow compass bearings to get to your destination. You should be able to identify geographical features on a map. Look at a map. Do you know what the symbols mean? What do the colors black, brown, blue, green, white and red signify? What is the contour interval of your map?

Can you orient a map? Compass declination in the areas we canoe is close to zero so we usually do not need to adjust our compasses for it. Are you able to determine the exact direction from one point on a map to another using your compass? Do you understand the significance of a map's scale and where to determine what its scale is? If you answered "no" to any of these questions, read the chapter on "Backcountry Navigation" in the BSA Fieldbook.

TRAIN FOR ADVENTURE

Once your crew is organized and has mastered basic skills, you can begin preparing for high adventure by participating in training. Plan several outings to help you sharpen your skills

and to prepare yourselves physically, mentally and emotionally. Training for high adventure requires participation in a series of activities that gradually increase in physical intensity, duration and difficulty.

As you participate in training you acquire new knowledge and skills that make you more self-reliant and more confident. When you are well trained you become knowledgeable of your abilities and your limitations. Training leads to eager anticipation of greater challenges. Your crew will become welded together into an effective team. You will have increased confidence in each other, as well as in yourself.

To safely enjoy a rugged canoe trip, everyone must be physically prepared. Physical training should be geared to the type of adventure you plan to do. Since your goal is high adventure canoeing and portaging, you will need to get your arms and upper body in shape for paddling and your legs and back in shape for portaging. On a canoe trip you may be paddling 10 miles a day in windy conditions and may carry as much as 80+ pounds across numerous portages which are typically one-quarter to one-half mile in length.

Practice paddling a canoe with a buddy on a lake and then on a river. When you have mastered basic strokes, (forward stroke, J-stroke, backstroke, drawstroke and prystroke), practice maneuvering a canoe through a series of gates suspended above still water or empty milk bottles tied and anchored to a rock. Many Scout camps have slalom gates for practice.

A regular program of physical conditioning for at least six months prior to the trip is very strongly recommended. Plan some type of aerobic exercise for 30 - 60 minutes a session three to five times a week. Jogging, running uphill or up long flights of stairs, and hiking with a full pack are excellent methods of physical preparation.

How fast you can run or how far you go is not nearly so important as regular exercise. Start slowly and gradually increase the duration and intensity of your exercises. You should also do some upper body exercises such as push-ups, weight training, pull-ups, or best of all, paddling. **Remember: the first step is to check with your physician before starting any physical fitness program.**

Each participant in a Northern Tier expedition should not exceed the maximum acceptable Weight to Height table shown

in the appendix. Those who fall within the limits are more likely to have an enjoyable trek and avoid recurring health risks.

LEARN CANOEING SKILLS

The canoe is a marvelous craft; it is light, sleek, and responsive, but it is also easily damaged.

Since your canoe and paddle are your only means of transportation on water, treat them with care. Use your paddle to propel your canoe. Never touch the ground with the tip of the blade or the grip. Store spare paddles along the side of the canoe.

Be sure to follow the 9 points of the BSA Safety Afloat Policy when training for and attending the High Adventure Base. The wearing of a Personal Flotation Device by each person in a canoe (and while swimming) is required at the Northern Tier National High Adventure Bases.

USE THE “WET FOOT” TECHNIQUE

Protect your canoe from being cut, dented or scratched by never running it onto the shore or bank. When launching and landing, step in knee-deep water to load and unload the canoe. Wear your “wet shoes” (jungle boots, lightweight hiking boots, or similar type boot) to avoid injuring your feet and ankles on submerged rocks or when portaging.

LOADING YOUR CANOE

Carry your canoe into knee-deep water and place it gently on the surface. Dropping or slapping a canoe onto the water can pop rivets. While one person holds the canoe parallel to the shore the other person or people carry the gear to the canoe. Crew members carrying the packs should unbuckle hip belts of the packs before wading into the water. The person who carried the canoe will usually lift the pack off the back of the person carrying it and loads it carefully into the canoe. In windy conditions or when crossing large lakes, everything except paddles should be tied in so it will not be lost should you swamp or capsize.

When it is time for the people to get in the canoe, the person at the bow and at the stern hold the canoe for the person riding in the middle to get in. This person, also known as the duffer, sits in the compartment between the center thwart and the stern thwart. This person keeps his or her legs crossed or extends

them over the center thwart. The duffer must never put their legs under the thwart for safety reasons. The bow person then holds the canoe for the stern paddler to get in, then the stern person steadies the canoe for the bow paddler to get in.

TRIM YOUR LOAD

When loading your canoe, trim or balance your load. Balance your canoe from side to side so that both gunwales are equal distance from the water. Consider the weights of the occupants and also balance your canoe from bow to stern. If you will be paddling into a headwind for some distance, load the bow slightly heavier than the stern. If you are to run with the wind, load the stern slightly heavier. This gives you maximum loading efficiency.

PADDLING A CANOE

Paddle at a strong, steady pace that the two paddlers can maintain. A fast pace is ineffective because the paddlers tire easily and become sloppy in their techniques.

For safety in rough water, always kneel. The stern paddler is the captain of the canoe and gives commands except when the bow paddler spots an obstacle and an immediate change of course or stop is required. The bow paddler must be alert for rocks or logs in the line of travel, especially those lurking just below the surface.

AVOID SWAMPING ON A LAKE

Swamping a canoe can be serious and is best avoided. Stay off lakes with dangerous waves and do not paddle parallel to the waves. Avoid paddling across wide stretches of lake where you are exposed to sudden gusts of wind and lightning. Paddle within 100 yards of shore where you can quickly get to safety. Use islands and bays as shelter and prepare for the possibility of being windbound. The winds usually abate in the evening so you can paddle then if you need to make up for a time you are windbound. Getting an early start before the winds increase is a good plan to avoid the worst of the winds.



REACT TO SWAMPING

If you swamp on a lake, hang on to your canoe, it will float at the surface even when full of water. Allow the canoe to right itself while not losing contact with it. Check to make sure your canoe buddies are all right and hanging on to the canoe as you are. All of you cannot hang on to the same side, as this will cause the canoe to roll. Position yourselves on opposite sides of the canoe with one person at mid-ship on one side and the other two people on the other side toward the stern and bow but not at the ends. If someone is injured or knocked unconscious, assist this person to make sure their head is out of the water.

While hanging on to the canoe, check to see that all gear is still secured and will not interfere with getting into the capsized canoe. If there is gear floating free so that you can reach without releasing the canoe, it can be put back in the canoe. Do not release the canoe and swim to recover floating gear.

Even though the canoe is capsized, you need to get back in and paddle safely to shore. You and your canoe buddies will have to coordinate your movements to get into the canoe so that it doesn't roll over and toss you out again. Once you are in, each person must sit on the bottom of the canoe to get your center of gravity as low as possible.

You can move the canoe forward by using your paddles or by paddling by hand. Use the paddle by grabbing it at the grip and throat, reaching straight out with both arms extended, dipping the entire paddle just below the surface with the blade perpendicular to the water and pulling it toward you. Paddle the canoe to shore.

At the Northern Tier High Adventure program we do not paddle in whitewater or do whitewater canoeing.

However, there is a chance you could find yourself in a whitewater current since many portages start and end on each side of a rapid. If care is not taken in planning your approach to the upstream side of a portage, your canoe could be pulled into the fast moving current. If that happens there is a good chance you could capsize.

If you swamp in rapids, the greatest danger is being struck or crushed against a rock by the canoe. Filled with water, your canoe becomes a one ton boulder propelled by a powerful current.

The instant you swamp, get upstream of the canoe and hang onto it if possible. If you can salvage the canoe without endangering yourself, work it toward shore keeping either the bow or stern pointed upstream or ride the current into placid water where a rescue can be effected.

In extremely cold water, long stretches of rapids, or when the canoe is solidly lodged, look for another craft or for a line tossed from someone on shore. If neither a canoe or line is available, work your way to shore taking advantage of rocks which deflect the current.

If you are swept into the rapids free of the canoe, float feet first to ward off obstacles and to avoid a foot entrapment which may drag you under. Never stand up in a fast current over knee deep. Your personal flotation device will keep you afloat as long as your feet are free of rocky traps on the bottom.

UNLOADING YOUR CANOE

Stop your canoe in shallow water before it runs ashore or strikes any of the rocks near shore. While the person in the stern steadies the canoe with his/her paddle, the person in the bow carefully steps out of the canoe into knee-deep water using the "wet foot" technique. The bow person then steadies the canoe for the person in the stern to get out. Both people then steady the canoe for the duffer (or middle person) to get out.

PREPARING FOR PORTAGING

In the canoe country of northern Minnesota, northwest Ontario, and Atikaki region of Manitoba, portaging is necessary to get from one lake to another or to get around a hazard

(waterfall, rapids, etc.) on a river. Portages will vary in length from less than a quarter mile to 1 mile or more. Most are in the range of a quarter mile to half mile in length. Learning to portage your canoe and gear safely and efficiently is very important. Your Interpreter will teach you how to portage safely and give you tips to make it easier.

First of all plan ahead to prevent dehydration and to determine who is going to carry what. 1.) To prevent dehydration each person should be sure to drink at least 3 quarts of water per day, especially drink water before and after each portage. 2.) To avoid confusion at the start of a portage assigning responsibility for each “portage piece” (canoes, packs, tents, etc.) is a good idea.

With two people holding the canoe, the third person unloads the packs, putting each pack onto the shoulders of the assigned person. Paddles, PFD’s and any other small items are carried by the two people carrying the packs. If possible avoid setting anything on the ground. A lot of effort can be wasted in picking things up more than necessary. Too many items can be left behind or lost by putting them on the ground.

FLIPPING A CANOE

Lifting a canoe to your shoulders can be done in various methods. We will discuss two methods. The **one-person method** can be used by older youth, adults, and staff. Use the cradle method as shown in the diagram below. Be sure to use the wet foot technique because the lift distance is less and there is a flat landing surface if the canoe is dropped. Get in the water up to your knees while being careful of your footing. In preparation for lifting the canoe, stand beside the canoe at the center thwart / canoe carrying yoke with your feet slightly spread.

Lift the side of the canoe closest to you up on to your thighs and let it rest there, reach halfway across and grab the yoke with the hand closest to the stern and start to lift the canoe out of the water, reach across with the hand closest to the bow and grab the far gunwale. As you do this the side of the canoe will rotate and slide on your thighs. You will now be in a squatting position with the weight of the canoe fully on your legs/thighs.

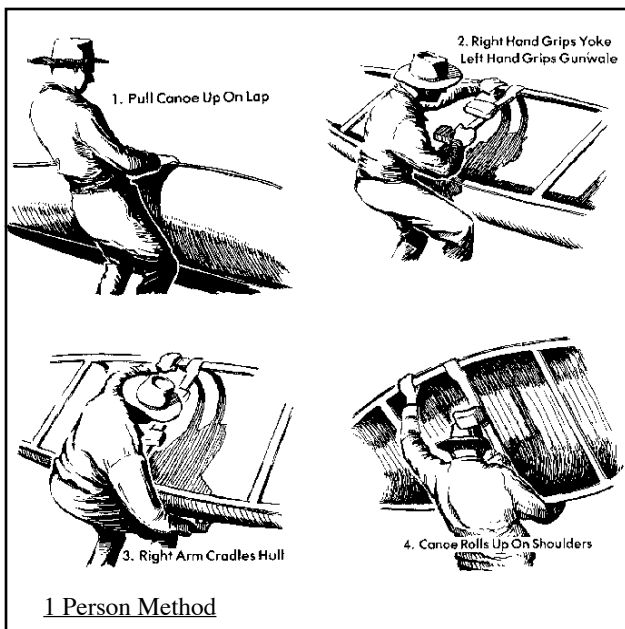
Slide the hand closest to the stern between your legs and cradle the side of the canoe with your hand and forearm. The

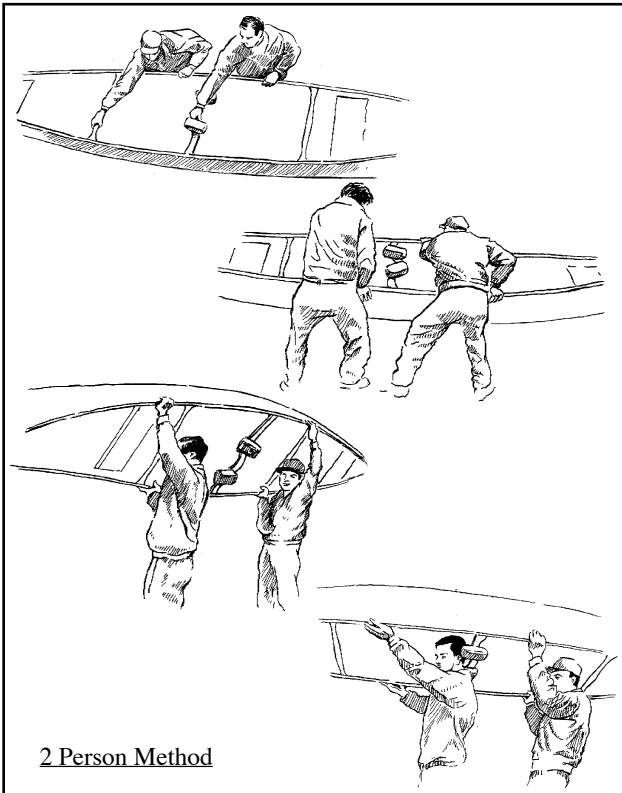
near gunwale will be at the inside part of your elbow. Now with a combination of lifting with the cradling arm, pulling with the other hand on the gunwale, you roll the canoe on to your shoulders.

Getting the canoe on to your shoulders is more a matter of rhythm, rocking, and timing. Do not muscle the canoe up. Your Interpreter will illustrate how to flip a canoe.

The **two or three person lifting method** can also be used get the canoe onto a person's shoulders. This may be the best method for most smaller people. It is not wise to get hurt trying to exceed your physical ability. Do the method best suited to your group needs and abilities. See graphic on page 20.

NEVER carry canoes keel-down over land with or without gear. This is what causes punctures, broken ribs and other major damages.





PORTAGING

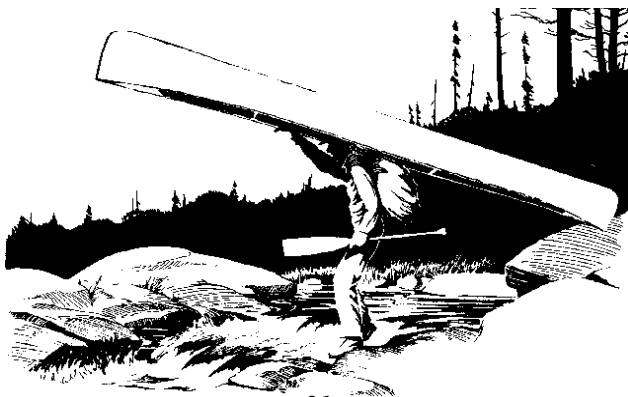
Try to move all your canoes, packs, and other gear, across the portage in one trip if possible. Each canoe team must stay together to help each other and prevent crew members from getting lost. Adult supervision should be maintained at each end of the portage to help with loading and unloading and to avoid leaving gear behind. Each crew member must be aware for potential mishap locations such as loose rocks, mud holes, fast water portages, and logs on the trail. Stay together and go at a reasonable pace. You are encouraged to rest often.

The person carrying the canoe can rest also without having to put the canoe down. Start by looking for two tree trunks which are close together in which the bow of the canoe can be

wedged between while gently letting the stern deck plate cap rest on the ground. This way the portager only has to step out from under the canoe, rest and catch his/her breath, then step back under the canoe, back the bow out from between the trees and continue on down the portage.

If you can help it, do not put the canoe on the ground while portaging. You will have to expend a lot more energy to get the canoe back up on the shoulders. Your Interpreter will show you other ways of resting and make the portaging experience more enjoyable.

Depending on the size of the participants, physical fitness of the participants, and the number of people in a crew, many crews may make two trips to get the gear across the portage - one to carry some of the canoes, packs, paddles and PFD's and a second to carry the rest of the gear. If you do this make sure to keep your gear off to the side and all together at each end of the portage to make sure it doesn't get mixed up with another groups gear if they arrive at the same portage while you are there.




SUGGESTED PERSONAL EQUIPMENT

QUESTIONS AND ANSWERS

There is perhaps nothing that will have a greater influence on your planned trip than the personal clothing and equipment that you will bring. These are only suggestions and should be used as such. The goal for your personal equipment should be to bring as little as possible to be safe and comfortable. You and your crew should spend a considerable amount of time on what you will be bringing. We strongly recommend taking a night or weekend to do a “shakedown” of personal equipment. Someone experienced in traveling the canoe country should be consulted and invited to this shakedown session as well the parents to be sure they are aware of what clothing and gear is expected and what is not. The time you spend at home in preparation will be well worth your efforts.

We are asked many questions about personal equipment. Some tell us that we advise too much, many others tell us we advise too little. It is a difficult dilemma. The correct equipment is a matter of personal choice and the mark of an experienced outdoor person.

Use these questions and answers with your Suggested Personal Equipment Check List found at the center of this handbook and in the Appendix when planning for your trek.

 **DO WE NEED BOOTS? YES.** We require boots and prefer the type known as jungle boots. You **will** get them wet! These are made from leather and nylon with drain holes in the instep. They usually cost between \$40 and \$90 a pair for boots made in the United States. **Less expensive imported imitations can also be found, but they will fall apart during your trip!**

There are other types of footwear now on the market that also work well. The main things to look for are boots that dry fast, protect the heel and toes, offer ankle support, have a gripping sole, and will last the trip. Most accidents on Northern Tier treks can be attributed to improper foot wear or not wearing shoes. You will be walking on sharp rocks, in mud and bog, and wading in streams.

You will even be swimming with your boots on (and wearing a PFD). Sandals, clogs or water socks are not to be used on the trail! They do not protect the toes, instep, and Achilles tendon. To summarize qualities of acceptable boots have: Rugged sole, Drainage at instep, Stitched or vulcanized sole, full foot coverage, and ankle support.

☞ ARE PONCHOS SUFFICIENT FOR RAIN WEAR? **ABSOLUTELY NOT!** Ponchos are dangerous in the event of a spill in the water. We recommend a quality rain jacket and rain pants. Nothing is more miserable than paddling all day in the rain in cheap, leaky rain gear. Make sure your rain gear is waterproof, not just water resistant.

☞ DO YOU SUGGEST SHORTS OR LONG PANTS FOR TRAVELING? We recommend **lightweight, synthetic or synthetic-blend, quick-drying long pants for traveling.** Do not wear blue jeans! Wet blue jeans are cold, chafe and take a long time to dry. Shorts can be worn once you are in camp or swimming, and in the sauna back at Base. Rough portage trails, insects, and sunburn, all preclude the use of shorts for traveling. Many people will choose to wear them however. For those who do, bring plenty of bug repellent and sunscreen or you WILL get bitten and burned!

☞ WHAT WEIGHT SLEEPING BAG SHOULD I BRING? **Bring a lightweight summer-rated synthetic filled bag good to +35° F** (it should stuff or roll to no more than 10" x 18"). The more compact you can pack your sleeping bag the better. **A compressor stuff sack will be helpful.** One of the biggest problems we see involves people who bring sleeping bags that are too bulky and warm. Evening temperatures in the summer seldom drop below 45° F.

☞ DO I NEED A COMPRESSION STUFF SACK? A compression sack will reduce the space your gear takes up in the packs. Smaller packs are easier to handle and portage. A compression sack is not essential but it will make your trip easier. Pick a compression bag large enough to handle your sleeping bag and clothes.

DO I NEED A GROUND PAD? We recommend one.

A 3/4 length closed-cell pad such as the “Ridgerest” or a “blue foam pad” is adequate. ThermaRest™ self-inflating pads are excellent. An insulated pad provides protection from heat loss by conduction thus requiring a lighter weight sleeping bag. Being a non-conductor it may provide some protection from lightning as well. As with the sleeping bag, don't bring a bulky open-cell foam pad. It will also soak up water like a sponge.

DO I NEED A HAT OR CAP? ABSOLUTELY!

We suggest a hat that has a brim that covers the neck as well as shade the face and eyes. Sunburn is a major concern on a canoe trip. A hat will protect you from the sun as well as keep a cold rain off your neck and shoulders.

DO I NEED A JACKET? YES.

The temperatures can be in the 50s with wind and rain any month of the summer season. We recommend a lightweight jacket. The styles available in synthetic fleece are just about perfect. Some people prefer a vest. A lightweight jacket combined with your rain gear and your Personal Flotation Device makes a very comfortable and warm combination.

DO NOT BRING COTTON SWEATSHIRTS!

We hope these questions help you in your planning. They are based on the experience of many crews, scouts and leaders just like yourselves. **CHECK AND RE-CHECK YOUR PERSONAL EQUIPMENT LIST FOUND IN THE APPENDIX OF THIS BOOKLET** and consult BSA manuals, outdoor handbooks, and people who have traveled the canoe trails.

Be aware that you are embarking on a rugged trip. Be cautious of advice from people who were lucky enough to travel the canoe country on a nice weekend, wore shorts and sandals, and perhaps traveled ten miles from their vehicle. Your trip will be more adventurous! You will travel in all kinds of weather and will probably average over 10 miles/day for 6 to 9 days.

As mentioned before, plan to share as many items as possible, such as a flashlight, cameras, fishing tackles, sun block lotion, insect repellent, etc. Each canoe should have a

map and map case.

The Northern Tier recommends that each individual write their name and crew number with a permanent marker on their clothes, uniforms, and personal equipment. This will help in reclaiming lost and found items.

CAMERA AND FILM

Although optional, a camera (and film if needed) are rewarding to record memorable experiences and beautiful scenes. Some crews select a crew photographer who takes shots for everyone. Another weight saving idea is for several crew members to share a camera and have digital photos/discs or duplicate prints made at home. You may need to bring additional batteries for both digital and film-based cameras.

MONEY

Campers spend an average of \$65.00 each in the Northern Tier National High Adventure trading post. If major items such as wool jackets, polar fleece vests, Northern Tier polo shirts, etc., are desired, more money will be needed.

PACK YOUR GEAR

Organize the contents of your pack so you know where each item is located. Always return items to the same area of the pack so you can find them quickly. Use heavy plastic bags to pack small items and to keep the contents dry even if your pack gets soaked.

You will want to pack heavier items toward the top of your pack and closest to your body to get the weight over your bone structure so your muscles will not tire easily. Your map, compass, sunscreen, camera and first aid kit should be readily accessible. Roll your clothing tightly and pack it snugly inside a plastic bag. Do not pack aerosol cans or glass jars because they are bulky and prone to break or empty their contents.

LOOK SHARP EN ROUTE

Wear your Scout or Venture uniform proudly! You are members of the Boy Scouts of America, the greatest youth organization in the world. A properly uniformed, sharp appearing, well mannered crew makes a lasting impression on people who observe you. Use the buddy system to keep track of everyone.

TRAVELING TO THE NORTHERN TIER BASES

Traveling to and from a Northern Tier National High Adventure Base is part of your high adventure experience. Many groups incorporate a side trip into their travel plans to see points of scenic or historic interest. Your advisor will have a more complete list but here are some possibilities you may want to consider:

ELY AREA: International Wolf Center - You'll find adventure and fun at the center. Resident wolf exhibit; Wolf Den store; research expeditions and wolf weekends; a spectacular award winning exhibit. See 6000 square feet of fur and teeth, video storybooks, reality and lore about the fascinating, age-old dance between wolves and humans.

Dorothy Molter Museum - Dorothy Molter was known as "Root Beer Lady". She lived on the Isle of Pines at Knife Lake, along the Minnesota-Ontario border from 1930 to 1986. Dorothy Molter's wilderness home, memorabilia and other unique interesting items are here to be looked at with fascination, respect and wonderment. Dorothy's homestead was dismantled in 1987 and transported by dogsled and snowmobile to Moose Lake, and then on to Ely, where volunteers later restored two of the cabins.

Vermilion Interpretive Center - Depicts local history through photographs, oral histories, artifacts and displays. Located at Vermilion Community College.

Tower/Soudan Mine State Park - Located on the way to Ely. This state park offers visitors the opportunity to see Minnesota's deepest and America's first iron ore mine as it appeared when it closed in 1963. A three-minute elevator cage trip down to the 27th level, 2400 feet below the surface, begins your tour of the Soudan Mine. You will tour some of the several miles of underground tunnels, escorted by an experienced miner.

DULUTH, MINN.: Marine Museum, Canal Park, and Aerial Lift Bridge - Duluth's most popular water front attraction, the Canal Park Marine Museum is a free museum of the U.S. Army Corps of Engineers. Film shows, model ships, and

exhibits featuring the commercial shipping of Lake Superior and the Duluth/Superior harbor. At Canal Park, you're within yards of giant lake carriers and foreign vessels as they pass under the Aerial Lift Bridge (only 1 other bridge like it in the world) and into the harbor.

WINNIPEG, MANITOBA: Manitoba Museum of Man and Nature - One of the finest interpretive museums in Canada. Seven galleries show interrelationships between people and the environment. Travel through millions of years in time and across the hundreds of miles of Manitoba's landscape. You can even climb aboard a full-size replica of the Nonsuch, a ketch that sailed in to Hudson Bay in 1668 and returned to England with a cargo of furs, resulting in the founding of the Hudson's Bay Company.

SELKIRK, MANITOBA: Lower Fort Gary National Historic Park - Relive the drama of the 19th century fur trade era at this national historical site - the oldest stone fur-trading post still intact in North America. It offers visitors an exciting chance to experience life much as it was over a century and half ago. Your visit will leave you with a deeper understanding of the fur trade and its impact on the emerging North American continent.

KEKABEKA, ONTARIO: Kekabeka Falls - Considered by many to be the Niagara Falls of northwest Ontario. Located just outside Thunder Bay, Ontario on the way to or from the Atikokan base. Excellent place to visit and/or have a picnic lunch. Campground is located here also for crews camping on the way to Atikokan.

THUNDER BAY, ONTARIO: Old Fort William - This fort offers visitors an exciting chance to experience life much as it was over a century and half ago. Here you can discover the turbulent times of the fur trade, its heritage, architecture, and working carts and trades. The entire reconstruction completes a portrait of bustling life during the fur trade. Your visit to Old Fort William will leave you with a deeper understanding of the fur trade and its impact on the emerging North American continent. Groups arriving a day early or departing a day later can take part in Old Fort William's overnight living history program. Contact the fort for details.

WELCOME TO NORTHERN TIER NATIONAL HIGH ADVENTURE!

DAY ONE

There are 3 base facilities that make up Northern Tier National High Adventure Programs. These facilities are located at Ely, Minnesota; Atikokan, Ontario; and Bissett, Manitoba. All crews will need to check in at the Base they are attending.

Upon arrival at base your advisor(s) brings the following items to the check-in office:

1. A Northern Tier Health and Medical Record Form for each person. Correctly signed by a doctor within 1 year of your trip, youth forms signed by a parent or guardian, and each section of the form completed.
2. National Tour permit.
3. Payment for any additional fees due - check, cash or money order.
4. Crew roster with addresses and phone numbers.
5. Crews traveling in the Boundary Waters Canoe Area Wilderness and/or the Quetico Provincial park need to have their permit confirmation letter(s).
6. Advisor certifications in Safe Swim Defense, Safety Afloat, CPR, First Aid and BSA Youth Protection.
7. Documentation sheet verifying all members of the crew are classified as Swimmers.

The Base personnel will review the medical forms and discuss other administrative matters with your advisor.

MEET YOUR WILDERNESS INTERPRETER

Upon your arrival at your a Northern Tier Base, your crew will be greeted by a wilderness canoe counselor/Interpreter. The Interpreter will join your crew and stay with the group for the entire wilderness canoeing expedition.

The Interpreter is an adult male or female who has been trained as a BSA National High Adventure Base Staff member. The Interpreter provides training support and acts as a resource person to the crew leader, advisors, and crew. In the event of

an emergency or any special situation involving safety, the Interpreter will act in concert with the adult leadership of the crew. The Interpreter is not a “fishing guide” but acts as a resource person for the skills pertaining to Scout camping and wilderness canoeing. They are specialists with the equipment and food carried on canoe trips. The Interpreter has had training in the history of the canoe country and the special safety practices to be observed on a wilderness canoe trip, who will accompany you throughout your trek. He or she will orient your crew to base facilities and help you prepare for your experience. You and your crew are expected to treat your Interpreter with respect, regardless of gender.

BE PHOTOGRAPHED

At the Ely, Atikokan and Bissett bases, a base photographer will take a photo of your crew while you are in uniform. Place your order when the photographer takes the photo, which will be developed into 5” x 7” or 8” x 10” color prints. There is an additional fee charged if you would like a crew photo.

FOOD OUTFITTING

Trail food for your **entire trek will be packaged and issued** at the Trail Foods Outfitting areas at each Base. Your crew will be involved in the final packaging and packing of these foods. Questions on the contents, preparation and cooking of these foods can be answered at this time also.

NOTE: Northern Tier High Adventure trail food is by necessity a high-carbohydrate, high caloric diet. It is high in wheat, milk products, sugar and corn syrup, and artificial coloring/flavoring. If an individual is allergic to some food products or requires a special diet, suitable trail food must be purchased at home and brought to Northern Tier. The Boundary Waters Canoe Area Wilderness (Minnesota) and the Quetico Provincial Park (Ontario) do not allow food items packaged in cans or glass bottles. There is no reduction in Northern Tier fees for individuals who bring their own food.

Northern Tier will do some food substitutions for vegetarian, medical (including allergies), and religious reasons but only with items we normally use and have in stock. Prior arrangements in **writing** are necessary at all three Northern Tier bases. Please review the *Wilderness Cookery* booklet for additional information.

Northern Tier crews can also customize the standard menu and make food substitutions by reviewing the *Wilderness Cookery* booklet and then mailing in the Food Substitution card from the back of the booklet. If you have any questions about food substitutions, please contact the Northern Tier.

EQUIPMENT OUTFITTING

Over \$5,000 worth of trail equipment is issued to your crew. Condition of the equipment should be checked carefully when it is issued. Your crew is responsible for damages to equipment other than normal wear, so treat it well.

EQUIPMENT ISSUED TO CREW:

1. Canoes, paddles, personal flotation devices.
 2. Kondos cordura packs for food and crew equipment.
 3. Granite Gear personal pack - one pack issued for 3 people.
 4. Lightweight, nutritious trail food.
 5. Cooking gear:
 - a) Coleman Peak 1 white gas stove and fuel bottles
 - b) nesting cooking pots
 - c) cooking utensils (cup, spatula, spoon, tongs, etc.)
 - d) trail oven for baking
 - e) bear bag ropes for hanging food
 6. Tools - shovel, saw, and (optional) ax.
 7. Nylon Tents with poles & stakes and Dining Fly
 8. Additional supplies
 - a) soap and scrub pads
 - b) toilet paper
 - c) matches
 - d) purification and sanitizing agents
 9. Emergency Radio (Ely), Satellite Phone (Atikokan and Bissett)
-

VISIT THE TRADING POST

ELY CREWS: Before departing on your trek you will want to visit the well-stocked Trading Post to purchase those last minute items. Some of the items not purchased back home may be found in our Trading Post. Now is the time to purchase items needed for the trail - there is no place to buy items once you start your trip. Minnesota fishing licenses will be available at the Northern Tier Trading Post. Ontario fishing licenses can be purchased at the Quetico Ranger Station when your crew checks-in to enter the Quetico Provincial Park.

ATIKOKAN CREWS: The Atikokan Base will carry a few trail items, Northern Tier and Atikokan base souvenir items, Ontario Fishing Licenses, trail maps, stove fuel, camera film, and snack foods. Necessary trail items are best purchased prior to your arrival at the Atikokan base.

Northern Tier souvenir items will also be available for purchase through the Northern Tier Mail Order Catalog which will be in your advisor's award packet at the end of your trip.

BISSETT CREWS: The Bissett Base will carry a few trail items, Northern Tier and Bissett base souvenir items, trail maps and snacks. Necessary trail items are best purchased prior to your arrival at the Bissett base. Since the base facility is located within the town limits of Bissett, several shops and stores are at hand to purchase additional souvenirs, Manitoba fishing licenses, film, trail items, and snacks. Northern Tier souvenir items will also be available for purchase through the Northern Tier Mail Order Catalog which will be in your advisor's award packet at the end of your trip.

ROUTE PLANNING

Your Interpreter will meet with you and your crew to plan a custom made experience for your crew based upon your desires and abilities. The crew leader is responsible for representing the interests of the entire crew according to the priorities you agreed upon at home.

During this session your crew leader and advisor get answers to specific questions. The route planning takes into consideration may different things including age and experience of your crew, current weather conditions, high or low water situations, wild fires (both current and recent), fishing, and the crew desires. The Interpreter then assists you in planning a trip tailored to your crew that will be fun, exciting, and challenging.

A written itinerary is prepared showing when and where you plan to camp. One copy of the itinerary is carried by the crew and one copy is kept at base in case the crew has an emergency.

BUY FISHING LICENSES

Some of the most spectacular gamefishing in North America is available in the waters covered by Northern Tier. The principle species are walleye, bass, northern pike, and lake trout. There are also panfish- yellow perch, sunfish, and rockbass. And in the Bissett area, there are an abundance of large channel catfish. Fishing can highlight your high adventure experience and supplement your trail food menu. The best fishing occurs early in the season when the rivers and lakes are cool.

Decide if you are going to fish before you leave home so you can prepare for it. Bring your rod and reel, a small plastic tackle box, fillet knife, sharpener, pliers with a side cutter and a pocket knife. The *Tips for Fishing By Canoe and Canoe Country Nature Guidebook*, written for the Northern Tier by Bob Cary, will describe the types of fish you can fish for, the types of lures to use, the types of equipment to bring, how to fillet a fish, knots for fishing, and information on catch and release. You can download a copy at www.ntier.org.

Whether you are in Minnesota, Ontario, or Manitoba, fishing licenses are available for purchase either in the trading post, ranger station, resort, or store. **Your advisor has information of the cost of purchasing a fishing license or check the chart in the appendix.**

NOTE: To purchase a Minnesota Fishing License you **must** provide the vendor with your Social Security number per Minnesota state regulations.

SHAKEDOWN YOUR GEAR

In a place designated by the Interpreter, you will unpack everything. Your Interpreter reviews each item necessary for your trek and demonstrates the best methods of packing the items in the Granite Gear 3-person personal packs. Store surplus gear and uniforms in your vehicle or crew locker/storage area.

SPECIAL CONSIDERATIONS

At Atikokan and Bissett, the crew advisor should confirm any shuttling reservations and/or float plane arrangements.

Crews entering the Quetico Provincial Park, (from either Ely or Atikokan) should review the camping fee schedule and make sure they are prepared to pay the fees. Quetico park fees can only be paid with U.S or Canadian currencies or money orders, MasterCard, and VISA. Checks or other credit cards are not accepted by the Quetico Ranger Stations.

FIRST NIGHT MEAL

In Ely your crew will be eating in the dining hall. At Atikokan, your crew will have the evening meal in the new program center. In Bissett, your crew will eat in a base facility. The menus are well balanced and nutritious.

OPENING EVENING PROGRAM

In Ely, you and your crew will attend an opening evening program to explain the regulations of the wilderness area you will be paddling in. A short non-denominational religious service will conclude the evening program.

WRITE HOME

After supper is a good time to write home. Your parent(s) will enjoy hearing from you. Postcards and stamps will be available for sale in the trading post.

A GOOD NIGHT'S SLEEP

Following the last orientation session in preparation for your trip, it is best to return to your overnight accommodations for a good night's sleep. Tomorrow you hit the trail!

HIT THE TRAIL

DAY TWO

After a nutritious breakfast, the final packing of your gear, and the last of the gear and food issue; your crew is ready for plenty of Adventure following the historic travel routes of the Voyageurs. During the day you feel proud and self-reliant as a modern day voyageur as your canoe glides through waters dancing with sunlight amidst endless forests of fir and birch. At night the wail of the loon and the shimmering of Northern Lights beckon you. The memories of your adventure will last a lifetime.

FOLLOW BUDDY SYSTEM

As you are canoeing or portaging, **always keep your crew together** and stay within hearing distance whenever possible. The Buddy System is a part of the BSA Safety Afloat policy.

The lead canoe sets a steady pace that allows everyone else to keep up comfortably and makes sure the crew travels in the

proper direction. The sweep, or end canoe, calls a halt when anyone needs to stop or is having difficulty. This is done by passing the word to the canoe in front of you until everyone gets the message.

Staying together is safer, avoids anyone becoming lost, promotes teamwork and looks sharp. The crew leader is responsible for making sure it happens. Normally the crew leader should be positioned about midway in the group, to monitor the progress and morale of everyone else. The crew leader decides when to take a rest stop, where to eat lunch, when to seek shelter from bad weather, and when to stop or turn back with the counsel of the Interpreter and advisor.

Go to bed early so you can get up early the next morning. Cook breakfast, break camp and start canoeing early in the day. Plan to arrive at your next campsite by early afternoon to avoid hot sun or rough water. Then you have plenty of time to swim, fish, explore and take photos. Traveling in a canoe or portaging after dark is not recommended except in an emergency.

SELECTING A CAMPSITE

Many campsites in canoe country are already established, but occasionally you may have to locate one. Do you know what to look for? Consider these four factors: wood, water, wind, and widow-makers. (They all begin with the letter W). Unless you are equipped with backpacking stoves, you will need wood to fuel your cooking fire. Water will definitely be convenient to your campsite. Wind can cause great difficulty, particularly if you pitch your tents too close to a large body of water where they are vulnerable. Choose a location that is sheltered by trees, shrubs, large boulders or a geographical feature.

Dead snags, limbs and rocky outcrops near your campsite are known as widow-makers because of their potential for disaster. Before you pitch your tent, look up for anything that might come crashing down. Check for overhead limbs that may catch flame and locate your fire away from them. In keeping with Leave No Trace guidelines, if you build a fire, make it a small fire and follow the regulations for fire building for the area you are paddling in. Do not strip bark or branches from live trees. Gather dead limbs and firewood from the ground and not from standing dead trees.

USING FIRE FOR COOKING

Use an existing fire ring where one is available. Normally in the BWCAW, your fire must be contained in the iron fire grate provided at each campsite **however due to the increased fire danger caused by the July 4, 1999 wind storm there may be a fireban in most if not all of the BWCAW.** (Backpacking cook stoves will be required by Northern Tier crews entering the BWCAW.) In the Quetico and the White Otter Wilderness Areas, most existing campsites will have an existing rock fire ring. (In Bissett, fires are not allowed.) Build a small fire, using hardwood whenever possible, instead of building an inferno using poor quality wood that produces little heat and few coals.

Never strip bark from a living tree or break off dead limbs if doing so will mar the beauty of the tree. Do not attempt to fell gigantic snags. Gather fallen limbs and branches even if you must hike some distance to find them. Better yet, bring a stove. Never leave a fire or lighted stove unattended.

To extinguish a fire, start by encouraging partially burned wood to burn completely. Splash plenty of water on the remaining embers and stir them. Repeat this process several times. When the fire is out, make sure by using the "cold out test". This is done by having one crew member cautiously and carefully run a bare hand over and through the charred remains making sure there are no hot spots or glowing embers that could flame up.

PREPARE DELICIOUS TRAIL MEALS

Northern Tier High Adventure provides lightweight, nutritious food. A meal rotation plan is used. Packaged in durable poly bags, these meals have been carefully developed and checked for nutrition and taste. A spice kit is provided to satisfy individual tastes. The quality and quantity of food provided is designed to meet the needs of growing young people who participate in physically demanding outdoor programs.

Read and follow the directions carefully to prepare delicious meals. Cooking is not required for any of the lunches or for some of the breakfasts, to help you get an early start on the trail.

Sometimes you can enliven your meals with freshly picked berries or freshly caught fish. Strawberries, blueberries and

raspberries are plentiful in many areas of canoe country. Your Interpreter can help you find them.

OFFER THANKS

Crews are encouraged to give thanks before eating meals on the trail and to use good manners. The **Wilderness Grace** is particularly appropriate:

WILDERNESS GRACE

For food, for raiment, for life and opportunity,
For sun and rain, for water and portage trails,
For friendship and fellowship,
We thank Thee, Oh, Lord.
Amen.

LEAVE A CLEAN CAMPSITE

The wilderness areas used by Northern Tier National High Adventure crews are all on public lands managed by a federal government agency. The BWCAW is managed by the U.S. Forest Service, the Quetico Provincial Park, the White Otter Wilderness Area, and the Turtle River Provincial Parks are managed by the Ontario Ministry of Natural Resources, while the Atikaki Wilderness Park is managed by the Manitoba Ministry of Natural Resources. The campsites in these areas are all open to the public to use and are strictly on a first come first served basis. Wherever your crew camps, you are responsible for maintaining the wild character of the wilderness area you are camping in. Keep your impact to a minimum and leave each site cleaner than you found it. Carry out all garbage and unburnable trash that you carried into the wilds.

Crews also help by cleaning up sites littered by other campers. This helps Northern Tier High Adventure maintain the respect of the government agencies and represents a service project in keeping with the BSA principle of good citizenship and our own motto: "Do a good turn daily."

BREAK CAMP

The crew leader assigns tasks the evening before so everyone knows when to get up in the morning and what to do. Firemen get up first to start the fire using wood gathered the day before. Other duties correspond to those for pitching camp.

When crew members are not busy with crew duties they take down their tents and pack personal gear. The crew leader makes sure your fire is extinguished, using the “cold out test” as described earlier in the “Using Fire for Cooking” section. Thoroughly police your campsite before you depart.

RESPECT THE WILD OUTDOORS

Help preserve the beauty of the North Woods and respect others using the wilderness by pledging to conduct yourselves in an exemplary manner by following the principles of the “Leave No Trace” program. To learn more about the “Leave No Trace” program you can purchase the *Lakes Region: Leave No Trace* booklet from the Northern Tier Trading Post or visit the LNT website at www.lnt.org.

- Pick up all litter from campsites, trails and waterways.
- Never deface a tree, boulder or man-made facility by carving or writing on it.
- Wash clothes and dishes at least 200 feet from any source of water.
 - Do not cut green boughs or trees.
 - Unless you are traveling in the Boundary Waters Canoe Area from the Ely base, you will need to use the cat-hole latrine method of covering fecal matter. Locate your cat-hole latrine at least 200 feet from any body of water and dig a shallow (6-8 inches) hole in the top layer of duff so that fecal matter will decompose quickly. Bury or pack out used toilet paper. In the BWCAW, all legal campsites will have a pit latrine with a fiberglass cone toilet seat at the back of the site.
- Show respect for other groups by camping away from their campsites and preserve the natural solitude by not making loud noises.
 - Treat wildlife with respect and avoid dangerous encounters by leaving these creatures alone. Be sure to hang your food packs out of harms way of all critters.
 - Participate in training on low impact camping before coming to a Northern Tier High Adventure Base if you get the opportunity.
 - Leave artifacts where you find them and do not collect specimens. Mark the location of any unusual discoveries on a map and report them to your Interpreter and the base director.

LEARN ABOUT THE ENVIRONMENT

To learn about the plants and animals of the northwoods, visit the Northern Tier website at www.ntier.org to download the *Tips For Fishing By Canoe and Canoe Country Nature Guide Book*. It can be found in the Northern Tier Documents section. Use it to better understand the north woods environment, to record sightings of wildlife and plants you may see.

KEEP HEALTHY AND SAFE

Strict adherence to proper health and safety practices is crucial. You are responsible to yourself to keep safe and healthy, but this is also a crew responsibility. Failure to purify water or to thoroughly rinse dishes may affect everyone in the crew. Read these trail practices to keep you and your crew strong, safe and healthy.

KNOW FIRST AID

Make sure someone in your crew is trained in first aid. Ailments most commonly requiring treatment are: sunburn, cuts (all types), sprains, blisters, burns, headache, stomachache, constipation, diarrhea, and embedded fish hooks. Stock your first aid kit with supplies to handle these problems.

Every injury or illness must be recorded in the base first aid log. While on the trail, your Interpreter will fill out a report to be posted in the base medical log.

KEEP PERSONALLY CLEAN

Good campers are clean. Personal cleanliness makes you feel, smell and look good to yourself and others. Take pride in your personal appearance and that of your crew.

Hot showers are provided at each base. On your trek, you can wash with the aid of a pot and the help of a buddy. Fill the pot with water and seek a location at least 200 feet from any sources of water. While wearing your swimsuit, have your buddy douse you with some of the water. Lather yourself with biodegradable soap and have your buddy douse you again to rinse away the soap. You can then help your buddy wash. You will feel marvelous and refreshed.

WASH YOUR CLOTHES

Clean clothes are the mark of a proficient camper. They lift

morale and self-esteem. Wash your clothes in a pot using a small amount of liquid laundry soap. Scrub them vigorously, rinse thoroughly, and spread them over tree limbs or shrubs to dry. Dispose of the wash water at least 200 feet from any water source.

CARE FOR YOUR FEET

While you are canoeing and portaging, sound, healthy feet are a must. Cut your toenails short and square; don't round the corners. We do recommend wearing two pairs of socks in your boots to help prevent blisters. Your feet will be wet throughout the day while your paddling due to the Wet Foot technique but be sure to dry them thoroughly, air them out briefly, and apply foot powder liberally to prevent trench foot and other problems. Put on your dry camp socks and your camp shoes as soon as you can when you get to your campsite.

Due to the sharp rocks, lost fishing tackle, and the potential for broken glass - **DO NOT WALK AROUND THE CAMP-SITE OR GO SWIMMING BAREFOOT.** The only time you should be barefoot is in your sleeping bag.

BUGS, BEE STINGS, AND OTHER INSECT BITES

Insects are sometimes a real nuisance in the North Woods, so knowing how to deal with them is important for your comfort. Black flies are often prevalent early in the season while mosquitoes and no-see-ums generally follow later.

While moving on the water or on the trail you probably will not be troubled by insects - they wait for you to stop at night and get up in the morning. Long trousers and a long-sleeve shirt help ward them off. Keep insect repellent handy. Those with at least 30 percent of the chemical N, N-Diethylmetatoluamide (DEET), have proved to be most effective and are sold in the trading post.

Many insects are attracted to the color blue, so choose clothing with other colors. If you are particularly vulnerable to insects, (a few people are), you may need to wear a head net to keep them out of your face. Tucking your long pants into your socks and wearing a light weight long sleeve shirt will deter the insects from biting you. By taking these precautions and selecting wind swept campsites, you can effectively deal with insects.

If you are sensitive or allergic to bee stings, be sure to carry your anaphylaxis (bee sting) kit with you. If you are sensitive to other insect or spider bites be sure to have an antihistamine or a doctor-recommended drug with you. Be sure your adult leader and Interpreter are aware of these sensitivities/allergies and any drugs or bee sting kits you may have with you.

HYPOTHERMIA

Hypothermia is the cooling of the inner core of the body and defies self-diagnosis. It results from exposure to cool, wet, windy weather. Many cases occur in air temperatures of 30 to 50 degrees F., which are common during the summers. Hypothermia occurs quickly if you swamp in frigid water, especially moving water. Dehydration, wet clothing and exhaustion increase the chance of hypothermia. Symptoms include faltering coordination, slurred speech, loss of judgment, disorientation, numbness with cold and fatigue. A hypothermic person will have extreme difficulty in walking a 30 foot line heel to toe. Give this test to determine if a person is truly hypothermic. Shelter a hypothermic person from wind and weather. If the patient must be moved, do it as gently as possible. Replace wet clothing with dry, preferably fleece or woolen, clothes. Put the patient in a sleeping bag and apply heat to the sides, groin, head and neck with water bottles, warm-moist towels, or the body of another person. If the person is able to drink without choking, give him or her warm sugary drinks.

SUNBURN

Prevent it by wearing a broad-brimmed hat, long pants, and applying a high numbered sunscreen (#15 or higher). Cover the most susceptible parts of your body - nose, head, face, neck, ears, arms, knees and legs. Fair-skinned campers should apply protection early in the morning and reapply it during the day. If you do become sunburned, treat it immediately and cover up with long pants, long sleeve shirt, and a hat. Get the afflicted person to shade and administer fluids.

HEAT EXHAUSTION

Prolonged physical exertion in a hot environment causes heat exhaustion. The symptoms are feeling faint, clammy skin, and weak, rapid pulse. Body temperature remains near

normal. Have the victim lie down in the shade to rest and drink fluids.

HEATSTROKE

Though less common than heat exhaustion, heat stroke is much more serious. The body's cooling mechanisms stop functioning from overwork. The patient's body temperature soars and the skin is hot, red and dry. Cool the patient immediately with a dip in a lake or stream or put him/her in the shade and drape bare skin with wet cloths. When the patient is able to drink, give fluids. Treat for shock and get patient to a physician.

DEHYDRATION

Strenuous activity during sunny days will cause you to sweat profusely. Drink more fluids than you usually do to avoid dehydration and travel early in the day. Dehydration is recognizable by headache, light-headedness, dizziness, nausea, general weakness, muscle cramps and sometimes fever and chills. Get the patient to shade and give plenty of liquids. **It is a good practice to drink before and after every portage.**

PREVENT ACCIDENTS

Most accidents occur late in the day in camp, not on the trail. Many of them involve horseplay. Fatigue, hunger, and mild hypothermia or dehydration may impair a crew member's performance and judgment. Common causes of accidents include rock throwing, improper use of knife and axe, getting snagged by a fish hook, running through campsites barefoot, and carelessness around fires. Maintain crew discipline and practice safety at all times to avoid injuries from accidents. Always use the principle of the Safe Swim Defense when swimming and Safety Afloat when on the water. Always wear your wet boots and PFD while swimming, and always wear shoes in camp.

AVOID STORMS AND LIGHTNING

Open bodies of water, high peaks, large meadows, and crests of ridges are extremely hazardous places to be during high winds and lightning. Campsites with one or several taller trees are also hazardous since lightning could be attracted to this taller object. Anticipate changes in the weather and change your

plans to avoid a dangerous encounter. Stay close to shore when canoeing and quickly descend from high peaks or ridges away from the direction of an approaching storm. Get off the water at the first sign of lightning. Do not try to out run the storm.

If caught in an exposed place on land, squat down and keep your head low. By squatting with your feet close together, you have minimal contact with the ground, reducing danger from ground currents. Squatting on a foam pad may provide additional protection. If the threat of lightning is great, spread your crew members 10 feet apart, or more. Stay away from the water and do not get near the aluminum canoes. If one person is jolted, the rest of you can administer cardiopulmonary resuscitation and first aid.

Minimizing Risk of Lightning Injuries

- ✦ Do not stand next to, under, or near single tall objects - a tree, pole, tower.
- ✦ Get off and away from water if swimming, fishing, canoeing.
- ✦ Avoid standing on wet ground if you can.
- ✦ Do not hold or stand near metal objects that conduct electricity - tent poles, fishing poles, aluminum canoe paddles.
- ✦ Do not stand out in the open, on a peak or ridge, in a depression, or in the entrance of a cave.
- ✦ Seek cover in a large group of trees of smaller uniform size.
- ✦ If you have nowhere to go, squat down facing downhill, make yourself as small as possible and keep your hands off the ground. If possible, sit or squat on dry, non-conducting material (pack without any metal, sleeping pad, foam pad).
- ✦ If there are several people, spread out over wide area to minimize chances of all getting struck/injured.

STAY PUT IF “CONFUSED” OR LOST

If your crew stays close together, the possibility of anyone becoming lost is remote. If you do get separated from your crew, stay put in one place, do not move, and make your presence known. Create a signaling device. Build a fire if you have matches and keep it going. Suspend a bright tarp or clothing between a couple of trees. Use a whistle or yell out if you hear someone approaching. Your crew or a search party will find you.

MISSING PERSONS

The policy and procedure for groups is to use the “Buddy System” and the “Rule of Four” for all BSA outdoor activities including canoe trips at the Northern Tier. In the event of a missing person(s) from a group or crew, do the following:

- 1) Immediately upon recognizing that someone is missing - STOP! and make a comfortable camp.
- 2) Notify others as soon as possible of the missing person(s). This should include other canoe parties that are in the area. Ask anyone or group traveling through the area to look for the missing person(s).
- 3) Notify local authorities (including the Ely, Atikokan, or Bissett Base) as soon as possible. Use any means at your disposal including the radios (Ely) or satellite phones (Atikokan and Bissett). Ask passing canoe parties or other Northern Tier crews to relay information. We suggest that this be in writing when possible. Be aware of where ranger stations, resorts, fish camps, or nearby roads are located to help secure assistance.
- 4) SEARCH AND RESCUE should be handled by experienced personnel, your position is to stay where you are and help us as instructed. Do not send members of your party to look for a missing person(s) unless instructed by Northern Tier staff and/or search and rescue personnel to do so.
- 5) When the missing person(s) are located make sure all authorities are notified and contacted before continuing on your trip.

SECURE YOUR FOOD

Bears, chipmunks, mice and other rodents are fond of trail food. Hanging your food and “smellables” at night is a wise precaution. Remember, perfumed items (i.e. toothpaste, soaps, Chapstick, etc.) may smell like food. Your Interpreter will advise you on what to do and how to do it. See the appendix for several diagrams illustrating how to hang a bear bag. Your advisor also has information about bear country in the leader’s *Expedition Planning Guide*. **Whether on the trail or on base, do not take food into any tent or cabin.**

LEAVE WILDLIFE ALONE

Rabbits, bats, ground squirrels, chipmunks and other rodents transmit rabies, bubonic plague and other diseases.

Do not handle, feed, or provoke wild animals.

PURIFY ALL DRINKING WATER

All water from all natural sources - including springs, streams and lakes must be purified by bringing it to a rolling boil, treating with a chemical purifier, or filtering. This rule must be strictly enforced. Your own well-being is at stake.

WASH AND RINSE DISHES THOROUGHLY

Protect the health of your crew by thoroughly washing and rinsing dishes in hot water to which a sanitizing agent has been added. Let dishes and utensils air dry. The dirty dishwater should be disposed of at least 200 feet behind the campsite and at least 200 feet from any water source.

CLIMBING

Both rock climbing/rappelling and tree climbing are activities that are not permitted while on a Northern Tier trek due to the great possibility of falling and being injured.

SWIMMING AND DIVING

All swimming and water activities must be done in accordance with the BSA Safe Swim Defense policy. Swimsuit or shorts must be worn by all swimmers. No “skinny dipping” allowed. In addition, while on a Northern Tier trek, swimming must be done while wearing your wet boots and a PFD.

Diving is prohibited at the Northern Tier per the BSA Safe Swim Defense policy. Therefore, all entry into the water must be feet first or by wading into the water. Jumping feet first into the water is allowed from rocks or ledges **no greater than five feet above the surface of the water if the water is clear and the depth of the water is 10-12 feet deep.**

CLIFF JUMPING

Cliff jumping or jumping into the water **from any height greater than 5 feet above the surface of the water is prohibited.**

WHITEWATER POLICY

The running of rapids, whitewater, swift water or waterfalls is prohibited. All Northern Tier crews will portage around all falls, rapids, fast water, etc. During times of unusually high water it will be necessary to be very careful and watchful while traveling.

SAFE FISHING

If fishing from a canoe, only have 2 people in the canoe. PFD's are to be worn at all times while on the water. The buddy system of 2 canoes must be followed as well as BSA Youth Protection Policies. If fishing from shore, be careful with casting in the vicinity of other people. When not fishing, make a policy concerning the storage of hooks and lures while in camp. (For example, all hooks/lures must be either secured to an eyelet of a fishing pole and the pole stored away from a path, or the hook/lure must be removed from the line and stored in the tackle box. Any free swinging lures or lures left on the ground are confiscated by the leader.) Enforcing such policies will prevent an injury to someone walking by a lure and getting snagged, or by stepping or sitting on a lure.

SOLO CANOEING

There will be no solo canoeing. There must be a minimum of two canoes in case one canoe swamps then the other canoeist(s) can assist the people in the swamped canoe.

ROCK THROWING

No rock throwing while on Northern Tier trips. This activity has caused numerous serious injuries, some requiring medical evacuations.

BOOTS AND SHOES

You must wear boots or shoes in all wilderness trail campsites, while canoeing on the trail, swimming, fishing, etc. Bare feet and under-protected feet are a major cause of foot injuries. **Absolutely no bare feet, sandals or water slippers.**

TOBACCO

Our Scout Oath reminds us to keep ourselves physically strong. The use of smokeless or smoking tobacco adversely affects the body and causes cancer. Because of fire danger, smoking is permitted only in an established camp near a fire ring or fire grate. No smoking is permitted in any Northern Tier building or vehicle.

ALCOHOL AND DRUGS

Possession or use of alcoholic beverages, illegal drugs, or misuse of prescribed drugs is expressly prohibited. Groups or

individuals found in violation of this national policy of the Boy Scouts of America, will be sent home immediately, as arranged with the council office or parent.

FIREARMS AND FIREWORKS

Shooting firearms are not allowed at Northern Tier. Do not bring firearms or archery equipment with you. Trying to enter Canada with firearms will greatly interfere with your entry into Canada. Fireworks are highly regulated in Minnesota and are mostly illegal. Fireworks are a safety hazard and are prohibited by Northern Tier National High Adventure. Leave them at home.

YOUTH PROTECTION POLICY AND ABUSE

Boy Scouts of America's Youth Protection Policies must be adhered to. No one-to-one activities between youth and adults are allowed. The BSA two leader policy must be followed. No youth and adults are allowed in the same tents (except i.e. father and son). Physical, sexual or emotional abuse (including hazing) of a camper by his or her peers or by an adult leader is unacceptable anywhere. Reporting of abuse is the law. The local, county, state or provincial authorities as well as the BSA council representatives will be contacted if abuse is suspected.

FOREST FIRES

Our forests are a beautiful and valuable heritage. Be alert for forest fires. If you see white smoke boiling up, you may have spotted a forest fire. If you spot a fire or think you have, report it to your advisor or interpreter, who will report it to the program base director by radio or other best means possible. Your crew should not attempt to fight wildfires and should quickly leave the area. Because of the wilderness status, some of the areas which have naturally occurring fires (from lightning strikes) may be left to burn naturally. Other man-caused fires may be extinguished. Trained fire fighters will monitor or extinguish the fires accordingly.

FIRES ON BASE

A fire on any of the Northern Tier program base facilities needs to be reported to the base director or staff person immediately. If the fire alarm is activated, all crews are to report to the parking areas of the base facilities. Each base has a Fire Guard Plan posted.

WRAP UP YOUR ADVENTURE

Plan to return to base in the afternoon (usually 2:00 pm or later) of your final day. Atikokan and Bissett return time may vary due to vehicle shuttle and float plane arrangements. Crews are encouraged to spend their last night in base to get a good night's sleep before traveling. You will be assigned to an off-the-water cabin or a campsite depending on the base you are attending.

CLEAN AND CHECK IN CREW EQUIPMENT

At your last campsite scrub your pots and pans to get all the black off and clean other equipment thoroughly. Upon arrival back at base you will check all your gear in to the Bay Post or equipment issue area. The staff will check each item for damages other than normal wear and you will be charged for any damages and for lost items before your departure. Your advisor will also be able to pick up the car keys and valuables while in the equipment area (Ely) or shortly thereafter at the Canadian bases.

After equipment check-in, you will have time to take a hot shower and sauna and change clothes before dinner.

VISIT TRADING POST

Be sure to visit the Northern Tier Trading Post to purchase souvenirs, T-shirts, and outdoor gear. The Advisor will also pick up the awards packet in the trading post. At Ely, any mail you or your crew members may have, will be in with the awards packet. Mail must have the proper crew number on it for it to be in the right packet. See page 9 for the correct address.

EVALUATE YOUR TRIP

Your crew leader and advisor are asked to complete a written evaluation form. Many constructive suggestions are implemented as a result of these post trip evaluations. Your medical forms will be returned to you with the blank evaluation forms.

RECEIVE AWARDS

Meeting the challenge of a Northern Tier National High Adventure experience is worthy of recognition. An emblem is awarded to every successful participant to wear on the right pocket of the Scout uniform. These awards are not for sale.

They can only be earned.

Many crews plan a trek of 50 miles to qualify for the Fifty Miler Award. This award is intended to be a well rounded experience and not a test of endurance. To qualify, applicants must complete ten hours of conservation work. **Other crews elect to work on qualifying for the Extra Miler award, the S.C.E.N.E. emblem and/or the Adopt-a-Lake award in the Quetico Provincial Park.** The Northwest Voyageur Brigade Historic Trail Award can also be earned.

HEAD FOR HOME

A hot breakfast will be served to you, after which you are ready to begin your journey home. Hopefully your crew has an interesting itinerary planned en route.

REACH FOR CHALLENGES

Northern Tier National High Adventure means more than the beauty or physical challenge of the wild outdoors. It is an experience in living together and cooperating with other people under sometimes difficult circumstances. It is learning to surmount the challenges of canoeing and portaging. It is learning to live in harmony with nature. Your arm and leg muscles will ache and you may get soaked to the skin, but you will make it, even though there will be times when you feel as if you can go no further. In conquering these challenges you will gain confidence in yourself and a belief in your abilities, and go on to even greater achievements. This new knowledge of yourself will inspire you to do something for other people, your God, and your country. Now is the time to act! Set your goals high and resolve to achieve them. You can do it.

YEAR ROUND ADDRESS

Northern Tier National High Adventure
P. O. Box 509
Ely, MN 55731-0509

Call 218-365-4811 to make a tentative reservation or request information. Also visit our web site at www.ntier.org.

You can e-mail us at info@ntier.org

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PHYSICAL CONDITIONING AND PREPARATION

☞ To safely enjoy a rugged canoe trip, everyone must be physically prepared. On a canoe trip, you may be paddling 10 miles a day in windy conditions and may carry as much as 80 lbs. across a portage. You will be using your arms and upper body for paddling and your back and legs for portaging.

☞ A regular program of physical conditioning for at least six months prior to the trip is very strongly recommended. Plan some type of aerobic exercise for 30 to 60 minutes a session three to five times a week. Jogging, running uphill or up long flights of stairs, and hiking with a full pack are excellent methods of physical preparation.

☞ How fast you can run or how far you go is not nearly so important as regular exercise. Other aerobic exercises such as swimming, bicycling, stationary cycling, and aerobic exercise classes can supplement your training. Start slowly and gradually increase the duration and intensity of your exercises.

☞ You should also do some upper body exercises such as pushups, weight training, pullups, or best of all - paddling. **Remember; the first step is to check with your physician before starting any physical fitness program.**

☞ You must get a physical examination from your physician within 12 months (ideally, within 30 days) of your High Adventure expedition. Use the Northern Tier Health and Medical Record form **ONLY!** Do not use your school or work physical form. Complete the health history and schedule a time for the physical exam. **MAKE SURE FORMS ARE SIGNED BY A PARENT OR LEGAL GUARDIAN FOR ALL YOUTH UNDER 18 YEARS OF AGE!**

☞ Anyone with significant hypertension (**150/95**) should be treated before coming to the Northern Tier to reduce their blood-pressure as close as possible to normal (**135/85**). They should continue on blood-pres

sure medication while participating in the expedition. Hypertension can increase the risk of angina or stroke. While we do not operate at high altitudes like Philmont, participants will be carrying heavy loads over steep and rocky trails and participating in bursts of strenuous activity in remote areas,



Each participant in a Northern Tier expedition should not exceed the maximum acceptable weight to height table shown below. Those who fall within the limits are more likely to have an enjoyable trek and avoid recurring health risks.

Height	Recommended Weight	Maximum Weight
5'0"	100-138 lbs.	166 lbs.
5'1"	101-143	172
5'2"	104-148	178
5'3"	107-152	183
5'4"	111-157	189
5'5"	114-162	195
5'6"	118-167	201
5'7"	121-172	207
5'8"	125-178	214
5'9"	129-185	220
5'10"	132-188	226
5'11"	136-194	233
6'0"	140-199	239
6'1"	144-205	246
6'2"	148-210	252
6'3"	152-216	260
6'4"	156-222	267
6'5"	160-228	274
6'6"	164-234	281
6'7"	170-240	295



A regular program of camping and canoeing is an excellent way to prepare for your Northern Tier High Adventure. Use the *Venture Scouting Canoe Camping* book at Scout meetings or on your training activities. Many Merit Badge pamphlets are also excellent resources.

FISHING LICENSES

DESCRIPTIONS AND COSTS OF FISHING LICENSES FOR MINNESOTA, ONTARIO, AND MANITOBA

FISHING LICENSE DESCRIPTION	MINN-ESOTA	ONTA-RIO	MANI-TOBA
Age 15 and under	\$18.00 See "A" below	See "B" below	See "C" below
Age 17 and under (Ontario only)	N/A	See "B" below	N/A
Full season, resident	\$18.00 USD	\$28.50 CND	N/A
Full season, nonresident	\$38.50 USD	\$65.50 CND	\$55.00 CND
Full season, nonresident conservation (reduced limit)	N/A	\$40.00 CND	\$30.00 CND
7 day, nonresident - MN 8 day, nonresident - Ontario	\$27.50 USD	\$42.00 CND	N/A
7 day, nonresident, conservation (reduced limit) 8 day, nonresident - Ontario	N/A	\$24.50 CND	N/A
3 day, nonresident	\$23.00 USD	N/A	N/A
1 day, nonresident	\$9.50 USD	N/A	N/A
Trout stamps (Minnesota only)	\$11.00 USD	-	-

N/A - Not Available; N/C - No Charge; USD - U.S. dollars; CND - Canadian dollars. Note: **Prices are subject to change.**

A - In Minnesota, there are two ways nonresident youth less than 16 years of age can fish:

1. Nonresident youth less than 16 years of age don't need a license if an accompanying parent or guardian is licensed. Any fish caught will legally be part of the catch and possession limit of the person who holds the license.

2. Crews who have nonresident youth less than 16 years of age who want to fish and are attending a camp are eligible to get a certificate that allows these youth to fish without a license. (Youth 16 years old and over and leaders must purchase a license only if they want to fish.) This certificate is good for only Minnesota and the BWCAW (not the Quetico Provincial Park) and can be obtained directly from the Minnesota Department of Natural Resources. The adult advisor has the information necessary to do this in the Expedition Planning Guide.

3. There is also a new nonresident youth fishing license for \$18.00 that allows youth to keep their own limit.

B - In Ontario, there are two ways nonresident youth less than 18 years of age can fish:

1. Nonresident youth under the age of 18 may fish without a license if accompanied by a licensed adult in charge. Any fish caught will legally be part of the catch and possession limit of the person who holds the license.

2. Non-Resident groups of children (at least five boys or girls) under the age of 18 years can fish under a special license for members of an organized camp **when accompanied by an adult with a fishing license.** There must be a minimum of five children to qualify for this license. Cost: \$4.00 Canadian currency per youth. Organized Camp Licenses can only be purchased at Quetico Park Ranger Stations or at Ministry of Natural Resources offices in Ontario.

NOTE: Live bait is banned in Quetico Provincial Park and barbless hooks are required.

C - In Manitoba, nonresident youth under the age of 16 may fish without a license if accompanied by a licensed adult. Any fish caught will legally be part of the catch and possession limit of the person who holds the license. A nonresident under 16 who wishes to have a separate limit must buy a license.

NOTE: **In Manitoba, anglers must use barbless hooks.** A barbless hook is a hook with no barbs or barbs that have been compressed to be in contact with the shaft of the hook.

VOYAGEUR HISTORY OF THE CANOE BORDER COUNTRY

The route between Grand Portage on Lake Superior and the Red River Settlement (now Winnipeg, Manitoba) was one of the most important routes of the early fur trade. There were two rival companies in the early days, the Hudson's Bay Company (British) and the North West Company (French). They later merged into the present day Hudson Bay Company. The post at Grand Portage was originally built by the North West Company in 1756 and thus started the trading in our area.

The portages used by these early Voyageurs and their Indian guides are the same that you will use. The Voyageur who trod those portages was usually of French origin and small in stature (being tall meant the long legs used up too much valuable storage space in the canoe). He was strong and enjoyed his lot as a wilderness traveler. His life style was much like that of the people he traded with. He wore skin clothing (until cloth was available) and most of all he sported a bright colored sash and usually an equally bright cap or chapeau. His possessions were few and consisted usually of a knife, a small hatchet, a pipe and gaily decorated tobacco pouch. These items and his religious mementos made up his personal belongings. When a Voyageur signed up for a trip, he was given the comfort items necessary for the voyage: boots, blankets, a tin cup, etc. Most of the Voyageurs stayed the winter in the north country or the Pays en Haut and were called Hibrenauts meaning "Winterers." This was a name given them in a ceremony at the height of land. The height of land is the continental divide between the waters flowing to the Atlantic Ocean through the Great Lakes to the east and Hudson's Bay to the north. This point is located on the Grand Portage route. At this ceremony they were sprinkled with water from a cedar bough and then took this oath: "I swear to never kiss another Voyageur's wife without asking her permission."

The Voyageur's day was long, usually 16 hours of paddling. His food was meager; dry corn, pea soup, dried fish and salt pork made up the bulk of his diet. The life of a Voyageur was hard but gave him a sense of being, and a reward that meant a life of true High Adventure. He sang as he traveled; you may want to learn some of these songs. The canoe base has a song also called "The Far Northland."

THE FAR NORTHLAND

Verse 1.

It's the far Northland that's callin' me away,
as take I with my packsack to the road;
It's the call on me of the forest in the north,
as step I with the sunlight for my load.

Chorus: From Lake Agnes, by Louisa, to Kawnipi I will
go, where you see the loon and hear his plaintive wail;
If you're thinkin' in your inner heart there's a swagger in
my step, then you've never been along the Border Trail.

Verse 2.

It's the flash of paddle blades a gleamin' in the sun,
of canoes softly skimming by the shore,
It's the tang of pine and bracken comin' on the breeze
that calls me to the waterways once more.

The Voyageur brought trade items from all over Europe to the natives of northern Canada. They traded these items for the pelts of the beavers common to the north. The beaver, lynx, marten, muskrat, bear, rabbit, fox and wolf were some of the most popular pelts. Farther west the buffalo, caribou and elk were important. These furs were collected, pressed into 90 pound bundles and shipped to Europe for sale.

The trade goods were just as varied as the pelts: iron goods including knives, axes, ice chisels were some of the most important but also guns, ammunition, beads, mirrors, blankets, cloth, pots, and pans and various wines and liquors were also important.

The Voyageur and fur trade opened much of North America and changed the life style of its native inhabitants. Traveling along the border today you will relive some of the earliest history of North America. You will follow in the footsteps of such famous men as La Verendrye, David Thompson, Alexander MacKenzie, Peter Pond and many others. A canoe trip in the border country is a true High Adventure experience!

For more information on the Voyageurs and the history of the fur trade era, we suggest "The Broken Blade" written for teenagers. This book is available through the Northern Tier Trading Post.

WILDERNESS ETHICS

The *BSA OUTDOOR CODE* sums up the way you should live while camping, hiking, or being active in the outdoors.

THE OUTDOOR CODE






*As an American, I will do my best to -
Be clean in my outdoor manners,
Be careful with fire,
Be considerate in the outdoors,
and Be conservation minded.*

The Boy Scouts of America follow “Leave No Trace.” The backcountry in which you travel is fragile. As Scouts, we must leave the area as natural as possible.

By observing and practicing the good behavior of a modern camper, the trip will go smoothly and set a positive example. Many of the areas you will be traveling in have a number of regulations to follow. Below are some of the things expected of you and your group:

NOISE - There are many types of noise. The type that is normally thought of is shouting or the banging of canoes on rocks. This type of noise is particularly obtrusive in the quiet evening of the North, but should be avoided during the daytime as well. A silent type of “noise” is the use of bright colored equipment that is visible from far away.

CAMPSTOVES - The use of single burner camping stoves is encouraged. Some advantages of using stoves are:

-  You can cook even though all wood is wet from rain
-  Your pots stay cleaner
-  Wood gathering is not necessary or is limited
-  The campsite and shoreline are not picked clean of branches, snags, etc
-  During dry spells, the fire danger is greatly reduced.

LITTER - Remember that litter includes aluminum foil in the fireplace, twist ties, rubber bands, cigarette butts, etc. As a good Scout crew, you will not leave trash and you will also pick up after others.

CUTTING TREES - When you build a fire, collect dead and downed wood well away from the campsite. Do not collect dead branches from dead standing trees or cut standing trees for firewood. The making of camp furniture is also discouraged.

AXES AND SAWS - Crews should minimize the use of these tools. Modern travelers find axes are used very seldom. Saws are used more frequently. Firewood is abundant if one goes away from the campsite to find it. The best firewood for cooking can be broken into pieces without the need of an axe or saw.

TOILET FACILITIES - Where there is no latrine; grab your insect repellent, a small amount of toilet paper, the shovel, and get well away from the water. Human wastes are posing serious health hazards in all wilderness and backcountry areas. You should be at least a **minimum** of 75 steps (200 feet) from the water, direct drainage routes, campsites, and portages.

GARBAGE - All non-burnable garbage will be packed out. Do **not** use latrines as dump sites. Be clean in what you do - as food wastes attract bears and other critters.

SOAPS - Use biodegradable soap. Wash your dishes and bathe at least 200 feet from the shoreline. Do **not** use soap directly in any lake or stream. Swimming without soaping up first is no problem.

BOOTS - Boots will need to be worn in the canoes for traveling and portaging. At the campsite wear sneakers or moccasins. The smoother soles will be much easier on the campsite than the lug soles of the boots. **Do not bring sandals or aqua socks.** They do not provide enough protection.

PITCHING TENTS - Digging trenches around the outside of your tent is absolutely forbidden and unnecessary with modern day tents. If you pitch your tent carefully in the proper spot, there should be no problems. Use your ground cloth to provide additional protection.

Wilderness is a resource which can shrink but not grow . . . the creation of new wilderness in the full sense of the word is impossible.

Harmony with the land is like harmony with a friend.

—Aldo Leopold

EQUIPMENT PROVIDED BY CREW

FIRST AID KIT - This kit should be patterned after BSA suggested kits like the one in the Venture Handbook on Canoe Camping. It should include often-used incidental items. It is a good idea for each crew member to carry a small kit of their own - Band-Aids, first aid cream, sun lotion, etc. It is a good idea to get the help of a physician or pharmacist in planning the kit. A suggested list of items for a crew first aid kit is included in the appendix of the advisor's *Expedition Planning Guide*.

LEATHER GLOVES - These are to be used for hot pots and rough camp chores. One pair per crew is sufficient.

CORD - We suggest a 50 foot length of lightweight nylon "parachute" cord. This is indispensable on a canoe trip.

REPAIR KIT - Pliers and other simple tools (such as *A Leatherman* or similar multipurpose tool) will always come in handy on camping and canoe trips. We suggest that you carry these tools in a small bag so they are always handy. Duct tape, soft wire, a sewing kit, safety pins, and other repair items are also very useful.

STOVES (Optional) - Single burner stoves are recommended. Northern Tier provides 2 stoves and fuel per crew as part of outfitting but some crews prefer to bring their own. Be aware of airline restrictions on transporting stoves.

LIGHTWEIGHT, WATERPROOF GROUND CLOTHS (Optional) - You may wish to bring two, three, or four plastic ground cloths (90" x 110") to use in or under the tent to protect your crew's sleeping bags or ground pads from dampness. Some people prefer under the tent to protect the tent floor, others prefer inside the tent. If it doesn't rain you may not need it. However, if it does, a ground cloth may mean the difference between soggy or dry sleeping bags.

MAPS - Each crew is responsible for purchasing maps of their route. Each canoe should have a compass, maps, and map case. It is best to purchase maps after confirming your route with your Interpreter.

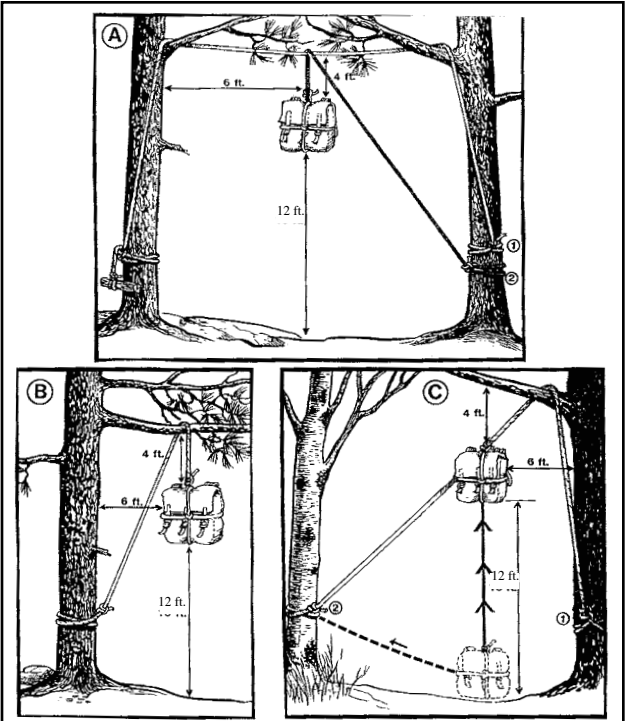
SPICE KIT - Standard spices will be provided for you by the base. You may wish to bring a few of your own favorites (jalapeno, Chile, lemon juice, etc.). These should be in small 2-3 oz. plastic bottles. Remember, you carry what you bring,

so keep it simple. No glass or metal food containers are allowed in the BWCAW or Quetico Provincial Park.

WATER PURIFICATION FILTERS (Optional) - The Northern Tier provides “Polar Pure”™, an iodine-based water purification system for your crew. If you choose to bring your own filtration devices, make sure the filters are adequate to purify enough water for your entire crew for the length of your trip. (1 1/2 gallons per person per day minimum.)

FANNY PACK OR SMALL DAY PACK (Optional) – One per canoe for water bottles, sunscreen, bug repellent, compass, and other essentials. This pack can be carried by the person portaging the canoe.

Figure 1. Methods to Hang the Food Packs



SUGGESTED PERSONAL EQUIPMENT CHECK-LIST

- STUFF BAGS** - Plan to bring all of your clothing and equipment in waterproof “ditty bags” of either plastic or cloth. Small dry bags or “zip lock” bags work well. Your sleeping bag and clothing will be safe in a heavy duty plastic bag. A few extra bags won’t take up much space (don’t forget cord or string closures or rubber bands if they are needed).
- SLEEPING BAG** - Small and lightweight, (good to a temperature of +35 degrees). Sleeping bags should compact to no more than 10” x 18” (**we recommend the purchase of a compressor stuff bag for your sleeping bag**). A two-pound synthetic fill bag is usually sufficient. Protect it from moisture with a plastic bag in the pack. You may wish to pack your extra clothing in the same compressor bag as your sleeping bag to save space.
- LONG PANTS** - One pair if you have a good pair of rain pants. Two if you do not. DO NOT USE BLUE JEANS! They take forever to dry, are hot when it is hot, cold when it is cold, wick water creating a refrigeration effect, and chafe and bind when you are seated in the canoe. The best pants for canoeing are loose-fitting, lightweight synthetic or a cotton/synthetic blend. Many inexpensive work pants work well, as do ripstop military fatigue pants.
- SHORTS** - One pair. These can be used as shorts or swim trunks (an athletic supporter or brief may be necessary when using as swim trunks). Important Note: Shorts or swim trunks are to be worn for all swimming and in the sauna at the end of the canoe trip.
- LONG SLEEVE SHIRT** - One
- TEE SHIRTS** - No more than two - Can wash by hand on the trail. Poly-cotton or synthetic preferred
- UNDERWEAR** - Two - Can wash by hand on the trail.
- SOCKS** - Three pairs. Wool or wicking synthetic. One pair to get wet and two pairs to keep dry for wearing in camp. Lightweight neoprene socks work well for your wet socks.
- JACKET or VEST** - Lightweight synthetic, easy to dry.
- RAIN JACKET and RAIN PANTS** - Good quality. Your rain pants can serve as a second pair of long pants.

- HAT** - Brimmed all the way around to protect ears, nose and neck. A chin strap is very practical for wind.
- CAMP SHOES** - Lightweight and comfortable, i.e., sneakers or moccasins (no sandals or lightweight “water socks” or “river slippers”).
- SMALL TOWEL** (Dish towel or synthetic, not a thick bath towel.) Your bandana could do double duty.
- HANDKERCHIEF** - or bandana.
- LONG UNDERWEAR** - Synthetic, wicking-style. Takes up little space and very versatile (can be worn under shorts for sun protection, as PJs, or as additional quick-drying warmth layer). Most useful for early or late season.
- BOOTS** - Should we wear boots? The answer is **YES!** The most common trail related injuries are twisted ankles and fall injuries caused by loss of footing. Boots which protect and support the ankle, and which have non-slip soles, are strongly recommended for both utility and safety. Hiking boots, work boots, or the US military style “jungle boots” are good choices. Remember that your footwear will get wet, so **DON’T BRING** insulated boots, rubber boots, or your expensive quality hiking boots you want to use later for hiking. Since the wilderness trail is no place to be “breaking-in” new footwear, be sure all boots are correctly fitted and comfortable with no risk of blistering or stress. Sandals and lightweight “water socks” are **not appropriate** footwear in place of boots and are not allowed.
- BELT OR SUSPENDERS**
- SOAP*** - Small bar and a small bottle of liquid for clothes washing (one may take care of the entire crew).
- TOOTHBRUSH**
- TOOTHPASTE*** - (Small tube)

EATING

- PLASTIC BOWL** - Approximate size - 12 fluid ounces
- PLASTIC CUP**
- SPOON**
- KNIFE** - We recommend that everyone carry a small pocket knife.

ESSENTIAL ITEMS

- INSECT REPELLENT***

- SUNGLASSES** - with UV protection. Spare eyeglasses if needed
- EYEGASSES STRAP** - For eyeglasses and sunglasses
- SUN BLOCK LOTION***
- CHAPSTICK with sunblock**
- FOOT POWDER** *- Use on feet daily. **IMPORTANT!** Feet that are wet all day can get the condition known as “trench foot”. Foot powder used each evening in camp will help avoid this painful condition.
- WATER BOTTLE** - We suggest a one quart water bottle. Dehydration is perhaps the greatest health threat.

OPTIONAL

- FISHING EQUIPMENT*** (Several people can share a break-down style rod. Don't pack in bulky PVC pipe style cases. A small pocket-sized tackle box is adequate).
- CAMERA***- (with plenty of film)
- FLASHLIGHT*** - (small, with extra batteries)
- FOAM SLEEPING PAD** - Closed cell or waterproof. Consider using the 3/4 length pads. Bulky, open-cell foam pads are not suitable for Northern Tier Treks.
- KNIT CAP** - For sleeping and warmth, especially for early and late season trips.
- COMB**
- METAL MIRROR*** - 1 or 2 per crew is all that is needed.
- SMALL BINOCULARS***
- BUG BITE RELIEF***
- MOSQUITO HEAD NET**
- BOOKLET** - *Voyageur Handbook to Adventure*

ITEMS NEEDED AT THE END OF YOUR TRIP

- CLEAN CLOTHES AND/OR UNIFORM(S)**
- TOILETRIES** - Soap, shampoo/conditioner, shaving supplies, deodorant, comb/brush, toothbrush, tooth-paste, wash cloth, etc.
- BATH TOWEL** - For use after shower and Finnish sauna.
- DRY SHOES, SOCKS, AND UNDERWEAR**
- SWIM TRUNKS OR SHORTS TO WEAR IN SAUNA**

NOTE: * Indicates items that can be shared with others in the crew.

NORTHERN TIER HIGH ADVENTURE OPPORTUNITIES

In addition to the High Adventure programs at the Charles L. Sommers Base at Ely, the Atikokan Base, and the Bissett Base, there are other opportunities available to Scouting youth and adults.

NATIONAL ORDER OF THE ARROW NORTHERN TIER WILDERNESS VOYAGE

The National Order of the Arrow is offering an opportunity to join other Arrowmen from across the country in cheerful service and the formation of lasting brotherhood on the pristine Boundary Waters Canoe Area Wilderness. Under the direction of the U.S. Forest Service, experienced Charles L. Sommers staff members with strong Order of the Arrow backgrounds will lead participants on a two week voyage into the Boundary Waters Canoe Area Wilderness. Participants must be 16 - 21 years of age to participate and be a member of the Order of the Arrow.

OKPIK COLD WEATHER ADVENTURES

Do you know how to camp comfortably in cold weather? Have you ever cross country skied? Would you like to learn about dog sledding? Northern Tier High Adventure offers a winter camping program starting in December with our Leader Training session, our Holiday Stay Program, and then the weekend Okpik programs from January to early-March. Dog Mushing Camp and Dog Sled Treks are available also. Custom trips or expeditions can also be accommodated. Crews receive special training in winter skills and represent the cutting edge of cold weather camping in the United States. Pick up information on this exciting program at the base office or contact Northern Tier National High Adventure office.

NORTHERN TIER NATIONAL HIGH ADVENTURE SEASONAL STAFF POSITIONS

Each year Northern Tier employs 125-175 men and women as seasonal staff. If you are 18 years of age or older why not accept the Northern Tier Challenge by becoming a staff member. Apply now! Staff applications available at www.ntier.org.

We made this book for you.
Please read it
thoroughly.



**NORTHERN TIER NATIONAL HIGH
ADVENTURE PROGRAMS**

Boy Scouts of America

P.O. Box 509, Ely MN 55731

Ph: 218-365-4811 Website: www.ntier.org

NORTHERN TIER NATIONAL HIGH ADVENTURE

SUGGESTED PERSONAL GEAR LIST FOR YOUR CANOE TREK



The following centerfold page is a quick reference checklist and can be used to do the actual gear packing for your trek. The center page is removable if needed.

For assembling and/or purchasing your gear be sure to review the “Questions and Answers” section on Personal Equipment found on pages 22-24 of this booklet as well as the more detailed “Suggested Personal Equipment Checklist” in the appendix on pages A-11 to A-13. All your gear and equipment should be in top condition.

Please share the Voyageur Handbook to Adventure and the suggested personal gear list with your parents. If you have questions, please ask your advisor or contact the Northern Tier High Adventure office.

SUGGESTED PERSONAL GEAR FOR CANOEING TREKS

See pages 22-24 and Appendix A 11- A 13 for additional information.

PERSONAL GEAR (based on synthetic, quick drying clothing. NO COTTON!)

“Dry” clothes (also known as “camp” clothes for trail)

- _____ Camp shoes (lightweight sneakers or moccasins) not sandals or water-slippers!
- _____ T-shirt (synthetic) one
- _____ Pants (synthetic) or use rain pants
- _____ Socks (wool or synthetic), one to two pairs
- _____ Lightweight fleece jacket or vest
- _____ Underwear (synthetic) one pair
- _____ Stocking hat
- _____ Long underwear, synthetic (usually not needed from July through mid-August)

“Wet” clothes (also known as “travel” clothes for trail)

- _____ Boots (U.S. made jungle boots best. Old hiking boots or work boots also good if instep drainage is added)
- _____ T-shirt (synthetic) one
- _____ Long-sleeve shirt (synthetic) for sun and bug protection. Sleeves can be rolled up for warm days.
- _____ Socks (wool or neoprene) one pair
- _____ Underwear (synthetic)
- _____ Pants, zip-off legs nice to have (synthetic). If not, also pack a pair of synthetic shorts
- _____ Broad-brimmed hat
- _____ Raincoat (good quality - no ponchos!)
- _____ Rain pants (can double as second pair of pants)

Other Gear

- _____ Sleeping bag (lightweight & compact 30 degree bag adequate - compression stuff sack should be used)
- _____ Stuff sacks for clothing and gear. Use compression sacks, zip-lock bags, or pack clothes with sleeping bag

- _____ Sleeping pad (closed cell or self-inflating foam. 3/4 length adequate)
 - _____ Bandanna or small camp towel
 - _____ Belt or suspenders
 - _____ Toothbrush
 - _____ Bowl, plastic - unbreakable, around 12 oz.
 - _____ Spoon, plastic or metal
 - _____ Cup, plastic or metal
 - _____ Water bottle (high quality, not old beverage bottles)
 - _____ Sunglasses, keeper strap
 - _____ Lip balm with sun block
 - _____ Personal medications as needed (two supplies carried in two different packs)
 - _____ Feminine hygiene items as needed
 - _____ *Pocketknife, small
 - _____ *Flashlight or headlamp (small, pocket-sized)
 - _____ *Matches in waterproof case
 - _____ *Whistle
 - _____ *Small compass
- *Should always be carried on person for emergencies

Optional:

- _____ Fishing tackle (small pocket-sized tackle box)
- _____ Camera
- _____ Head net for mosquitoes
- _____ Comb or small travel brush

ITEMS FOR THE END OF YOUR TRIP

- _____ Clean, dry clothes
- _____ Dry shoes
- _____ Toiletries (shampoo, conditioner, shaving supplies, deodorant, washcloth, soap, toothpaste, toothbrush, etc.)
- _____ Towel
- _____ Bathing suit for sauna
- _____ Flip-flops for shower

PROVIDED BY CREW (check with crew leader to verify)

- _____ **Crew first aid kit**
- _____ Leather gloves (one pair per crew) for camp chores, handling hot pots, etc.
- _____ Cord (50' length, 1/8" diameter) for clotheslines, tarps and tents, shoe laces, repairs, canoe lines, etc. (over)

- _____ Repair kit (multi-tool, small spool of fine wire, duct tape, sewing kit)
- _____ Maps (one set per canoe for your route. Interpreter will probably have a set also) May be purchased at base
- _____ Fishing rods (three to six per crew. Everyone can't fish at the same time in a canoe)
- _____ Fillet Knife
- _____ Lightweight fish stringer (one per canoe)
- _____ **Sunscreen, enough for crew**
- _____ **Bug repellent, enough for crew**
- _____ **Toothpaste (one small tube is more than enough for a crew)**
- _____ **Hand sanitizer (two 8 oz. bottles per crew)**
- _____ **Foot powder**
- _____ **Anti fungal cream or spray**
- _____ **Skin lotion, non scented**

Optional:

- _____ Ground cloths 85"x110" or 60"x 90" plastic sheeting to place inside tents). Some crews wouldn't travel without them and some never use them. During a rainy week ground cloths sometimes come in very handy.
- _____ Water purification filters
- _____ Spice kit, personalized to augment the base-issued kit (for crews that like really spicy food)
- _____ Daypack, one per crew for sunscreen, bug repellent, etc.
- _____ Metal mirror, small
- _____ Binoculars

NOTE on Fishing Equipment: (Don't pack poles in bulky, PVC pipe style cases. A small pocket-sized tackle box is adequate.)

Jigs with plastic bodies are a proven fish-getter in canoe country, are inexpensive, and take up little space. Black, yellow, chartreuse are popular colors.

Recommended Fishing Tackle:

- Jigs- 1/4-1/2 oz.
- Spoons - Silver or Nickel
- Minnow-type lures
- Plastic worms
- Hooks for live bait - #6, #4
- Swivels
- Split Shot Sinkers 1/4-1/2 oz.
(Lead is harmful to loons.
Steel sinkers are recommended.)
- Steel leader for pike.

- Group Tackle
(per canoe)
- Stringer
- Long-nose pliers

- Live Bait:
- Leeches
- Nightcrawlers

