

## Winter Camping Equipment

### SIMPLE EQUIPMENT LIST FOR YOUR FIRST WINTER TENT CAMPOUT

- \_\_\_ BACKPACK (and/or large Sports Equipment Bag, and/or Duffel Bag). Line it with a Lawn Bag first, to keep contents dry.
- \_\_\_ WARM JACKET & SCARF.
- \_\_\_ SNOW PANTS (available at thrift stores for \$3-\$5).
- \_\_\_ 2 EXTRA PAIRS OF PANTS
- \_\_\_ 2 WOOL SWEATERS, or POLAR FLEECE SWEATSHIRTS (about \$3 at Thrift Stores).
- \_\_\_ 2 LONG SLEEVE SHIRTS (Wool or synthetic fiber for good insulating quality & quick drying - \$3 at thrift stores).
- \_\_\_ 2 SETS of LONG UNDERWEAR (if buying new, look for 100% synthetic fabric, NOT "waffle pattern" cotton blend).
- \_\_\_ 2 extra sets of UNDERWEAR
- \_\_\_ 2 extra pair HEAVY NON-COTTON HIKING SOCKS & Liners (Make sure your boots are NOT TIGHT!).
- \_\_\_ STURDY, INSULATED WINTER BOOTS (Rubber is much better than leather. Leather will freeze at night).
- \_\_\_ PLASTIC BAGS (newspaper or bread wrappers, or plastic grocery bags to go under socks in case of wet leather boots).
- \_\_\_ WINTER GLOVES or MITTENS (As many as you own and can borrow!)
- \_\_\_ 2 WARM HATS (One for Sleeping ONLY-Sleeping hat should be designed to stay on at night).
- \_\_\_ WINTER SLEEPING BAG (or 2 regular Sleeping Bags stuffed one inside the other; or a regular Bag AND 2-3 Blankets)
- \_\_\_ ADDITIONAL SWEAT PANTS & SWEAT SHIRT (for sleeping only! Change ALL of your clothes, including your long underwear, inside your sleeping bag when you go to bed).

- \_\_\_\_ TWO (2) CLOSED-CELL FOAM SLEEPING PADS (or about 2-3" of newspapers under your sleeping bag).
- \_\_\_\_ "BLUE" 5'X7' TARP or other Plastic Ground Sheet.
- \_\_\_\_ GOOD QUALITY WHISTLE on neck chain.
- \_\_\_\_ POCKETKNIFE (SMALL Swiss Army Knife on neck chain, \$13. Never buy a knife made in China!)
- \_\_\_\_ MESS-KIT (BOWL, CUP, FORK, SPOON, PLATE -- heavy-duty plastic is warmer than metal).
- \_\_\_\_ 2 ONE-QUART WATER BOTTLES, filled ("Nalgene" Bottles can be filled with hot water for inside sleeping bag).
- \_\_\_\_ FLASHLIGHT & EXTRA BATTERIES.
- \_\_\_\_ SMALL FIRST AID KIT (You can make your own: BSA Handbook, Page 289).
- \_\_\_\_ PEN, PENCIL, SMALL NOTEBOOK, BSA HANDBOOK (No, you can't borrow ours).
- \_\_\_\_ COMPASS with a BASEPLATE, in a Zip-Lock bag (with map, if you have one).
- \_\_\_\_ MATCHES in a Zip-Lock bag.
- \_\_\_\_ CLEAN-UP KIT (Small Hand Soap, Small Toothpaste, Toothbrush, Comb, Floss, Fast-Drying Camp Towel).
- \_\_\_\_ TOILET PAPER (Half a roll in a Zip-Lock bag).
- \_\_\_\_ SLIPPERS or MOCCASINS (To wear inside cabin)



## Winter Camp

### Choosing a Winter Campsite

#### Factors to Keep in Mind

- Camping regulations
- Other campers
- Wind: avoid ridge tops and open areas where wind can blow down tents or create drifts.
- "Widow Makers:" look for dead branches hanging in the trees overhead.
- Low-Lying Areas: the coldest air will settle there.
- Avalanche Danger: select sites that do not pose any risk from avalanches.
- Exposure: south-facing areas will give longer days and more direct sunlight.
- Water Availability from lakes or streams will save you from having to melt snow for all your water.
- Level Ground makes for a more comfortable night.

### Setting up Camp

When you first get into camp, use your snowshoes or skis to tramp down areas for tents and your kitchen. If possible, let the snow "set up" for 30 minutes or so. This will help the snow harden and allow you to take off your snowshoes or skis. Set up your tents with the openings at a 90 degree angle to the prevailing winds. Stake out the tents. On a cold night you can build snow walls on the windward side of the tent. Mound the sides of the tent with snow (have someone inside pushing out on the tent to keep it from collapsing). When the snow sets up you will have a hybrid tent-snow shelter, which will have better insulation than the sides of the tent alone. Dig out a pit in front of your tent for a porch. This makes taking your boots off much easier. Put your foam pads (two are better than one) in the tent and un-stuff your sleeping bag and place it in the tent so it can "expand" from its stuffed size.

If the snow is deep, you may want to carve out a pit for your kitchen. Dig a pit at least two yards in diameter (for 4-6 people). You can mark out the circle using a ski or a rope. Dig down about one yard and pile the excavated snow around the perimeter. Pack the snow at the perimeter of the hole with your shovel. This will give you a two yard deep area, protected from the wind. You can carve out seats and benches, put your skis or snowshoes behind the pile as backrests, carve places for stoves, etc.

### Tips for Your Next Winter Camping Trip

#### Health & Safety

Use the buddy system for winter camping. Buddies can check each other for frostbite, make sure no one becomes lost, and boost the morale of the entire group.



Always test the thickness of ice before venturing any distance from the shore. Ice should be at least 3 inches thick for a small group; 4 inches of ice is safe for a crowd. Since ice thickness can vary considerably, it is best to stay near the shoreline of large lakes.

### Gear & Clothing

Encourage everyone in your group to wear brightly colored outer clothing so that each person will be more visible, especially during severe weather.

Use alkaline batteries in flashlights. Standard batteries deteriorate quickly in cold weather. Tape the switch of your flashlight in the "off" position until you are ready to use it. This will prevent it from being turned on accidentally while in your pack or on your sled.

Punch a hole in the top of your ice chisel and string a stout cord through it. Before trying to chisel a hole in ice, anchor the cord to something large or too heavy to be pulled through the hole so you will not lose your chisel in freezing water when the ice is penetrated.

Snow is the greatest thief in winter, swallowing up small dropped items. Tie or tape a piece of brightly colored cord to small items so they can be seen in snow. Some items, such as mittens, can be tied to larger items, such as a parka, to prevent them from being dropped and lost.

Always use a funnel to refuel a stove so you won't frostbite your fingers by accidentally pouring fuel on them. Fuel evaporates at a high rate of speed and quickly removes heat from anything it touches.

Place a stove or fire on a platform of logs or rocks so it will not melt through the snow. An inexpensive platform can be made from a small piece of thin plywood before you go camping.

Never light or use a stove inside a tent or snow shelter. A tent may catch fire, and a snow shelter may help lead to carbon monoxide poisoning. Neither of these potential mishaps is worth the risk.

A windscreen is essential for using a stove in the winter. Even a slight breeze will direct the heat away from its intended mark.

### Travel & Navigation

Plan to cover no more than 5 miles per day on a winter camping trek on snowshoes. An experienced group can cover 10 to 12 miles on cross-country skis.

Fatigue encourages accidents. Rest occasionally when building a snow shelter; taking part in cross-country skiing or snow shoeing; or participating in other active winter sports. Periodic rests also help avoid overheating.

### Food & Water

Melting snow in a pot to get water may cause the pot to burn through or may scorch the snow, giving the water a disagreeable taste. Prevent this by adding a cup or two of water in the bottom of the pot before putting in the snow to melt.

Small liquid-fuel stoves are much better for cooking in winter than fires, which are difficult to build with wet wood. Gathering wood that is frozen to the ground also can be difficult, if not impossible. A pressure/pump-type gas stove is essential in winter.

### Sleep & Shelter

Always allow ample time to make camp in winter, especially if you plan to build snow shelters.

Pulling a load over the snow on a sled or toboggan is generally easier than carrying it in a backpack.

Snow is a terrific insulator. Snow shelters are much warmer than tents for winter camping because they retain heat and keep out the cold wind. If you have adequate time for building snow shelters, you will spend a much more comfortable night sleeping in them than in a tent.



## **Winter Gear & Clothing Hints**

There is no such thing as bad weather, just poor choices in clothing.

Everything takes longer and moves slower in cold and snow. Equipment is more bulky and heavy. The days are shorter and much of your camp activities will take place in the dark. Patience is not simply a virtue at this point, it is fundamental. Practice setting up your tent and lighting stove before you go to winter camp.

Keep your camera inside your shirt or your jacket so it stays warm enough to operate. Film should also be carried close to your body because it tends to get brittle when cold. Wind film slowly to avoid tearing.

Keep flashlight batteries inside a pocket. What may seem like dead batteries could be just cold batteries.

Carry a small whiskbroom to brush off boots and gaiters, and a sponge to mop up damp spots.

Keep clothing in stuff sacks so they don't accumulate snow while opening and closing your pack.

If you can, tie a string to your flashlight and keep around your neck. Headlamps are best as they allow your hands to be free.

Whenever you take off hats and mittens, always stow them in a secure place. Things will dry out in the winter, believe it or not. It's a process called sublimation. The dampness turns to ice and evaporates from ice. Damp things should be hung on dry surfaces such as tarp lines.

Personal organization is crucial during the winter. You must know exactly where each and every single bit of your gear is at all times.

Never set things in the snow. It is possible to drop a lit flashlight in the snow and never find it again.

Avoid metal cups (except for double-wall thermal), metal whistles etc. which will adhere to warm mouth tissue when cooled to winter's subzero temperatures.

Practice working with all of your equipment with mittens on and modify any equipment that can only be operated with bare hands.

In winter camping there is very little margin for mistakes. If you forget to waterproof your boots and get wet feet, you will need to take action immediately to prevent frozen toes or feet.



Be careful around an open fire. Winter clothes and boots, which provide good insulation from the cold, will also stop you from feeling the heat until the boots, mittens etc. are burning or melted.

Avoid cotton like the plague. It becomes a frozen lump by the second morning.

Cotton kills because once it gets wet, it takes forever to dry in winter, leaving the door wide open for hypothermia. This is an essentially useless winter fabric, so leave the jeans at home. One caveat: bring a cotton bandana to clean your sunglasses.

Black is the best color for winter clothing because it absorbs solar radiation, keeping you warmer and enabling the material to dry quickly.

Don't overdress. Layers work best because you can take something off when you're sweating or add layers if you're chilly. Choose garments with zippers because they increase airflow and reduce sweating.

Bunting or fleece jackets are useless in most conditions without a windshell.

When you take off your gloves or mittens, put them inside your coat next to your body, rather than down on the snow.

The best way to keep your feet warm is to keep the rest of your body well covered. If your feet are cold put on a hat.

If your feet are cold, don't put on extra socks if your boots are already snug. Constricted toes are colder than those with room to wiggle.

Carry extra plastic bags (like those used for newspapers) to be used as tube sock vapor barriers directly next to the skin. Use these for Scouts with cold feet wearing boots too small for an extra pair of socks.



## **Winter Sleeping-System Hints**

Supper calories burn quickly on a cold evening. To avoid going to bed with an empty stomach and a chill, snack on high-calorie foods such as cheese, hard salami or gorp before turning in.

Don't sleep in the clothes you've worn all day. They'll be damp and provide little insulation. Pack an extra pair of long underwear and socks for the night. Sleeping nude is better than wearing damp clothes.

To help keep boots from freezing at night, put them in your stove or cook-kit bag and place under the foot of your sleeping bag.

Contact lenses and solutions can go in your sleeping bag to keep them from freezing.

Always wear a hat to bed. A balaclava is best because it covers your neck and ears.

Take along an extra foam pad for insulation under your sleeping bag.

To help keep cold air out of your sleeping bag when you roll over, take your down vest, sweater, or pile coat and lay it across your neck and chest, tuck it in so it acts like a collar.

To reduce frost buildup while you're sleeping, leave the tent door partially unzipped for airflow. Some condensation will inevitably build up inside, so after you crawl out in the morning, open the doors, let the wet tent freeze, then shake off the frost before packing.

Sleep with boot liner, insoles, and socks inside your bag. Some people even sleep with their boots in their bag or place their boots under their feet between the bag and sleeping bag.

Keep your nose and mouth out of your sleeping bag because your breathing will dampen the inside of your sleeping bag.

Turn your water bottles upside down before going to bed. If water freezes, the ice will be on the bottom of the bottle when it's turned upright. If it's extremely cold, cuddle up with the bottles (filled with hot water) in your sleeping bag, but make sure they don't leak.

When going to bed everything should be put back in packs, NOTHING IS LEFT OUT. Nothing is more unpleasant than feeling around in four inches of new snow for cups, spoons, stoves, etc.

Sleep on extra clothes. Pad your contact points with extra padding. Shoulders and hips deserve all the help they can get preserving heat.



Put water bottle in your bag with you at night. It keeps it from freezing and provides needed relief from "Sahara Throat" in the morning. Also it provides starter water for melting snow for breakfast.

Turn your sleeping bag stuff sack inside out and put your boots in it. Then place them under your sleeping bag, behind your knees, on top of your pad. In this way, they won't freeze by morning.

Go to the bathroom whenever you have to or else you are just keeping waste warm for no reason. Just before going to bed go to the bathroom and get up during the night too, if the matter comes to.

When going to bed visualize or think out exactly what you are going to do and where everything is that you'll need for the next morning. This will add tremendously to efficiency.

Keep a dry wool hat in your sleeping bag to wear at night. You lose 40% of your heat through your head.

Snow can make the finest of beds if it's prepared properly. When arriving at a campsite, remove your pack or sled and, keeping on snowshoes or skis, stomp down a platform larger than your tent. Crisscross the tent site in a grid pattern. Then let the site harden, which usually takes 30 to 45 minutes. When you finally move in, you'll have a firm surface on which to sleep.

You've eaten a warm and calorie-laden meal, drunk a big mug of tea, and are feeling toasty. Then you crawl into a sleeping bag that may be 101 F or 20' F below zero. A lot of your body heat will now be lost heating your bag. Instead of losing calories in this way, boil a pot of water while dinner is being eaten and pour the boiling water into Nalgene water bottles. Screw the lids on tightly, check for leaks then put them in your sleeping bag.

Reliving yourself at night means, at the least, rising from your bag to aim out the tent door. Women have it even harder. A more civil way of handling the business is to carry a one liter, wide mouth Nalgene bottle marked with a circle of duct tape so you can feel it in the dark and thus distinguish it from your water bottle. Urinate into the bottle, which with a little bit of practice can be done without getting out of the comfort of your sleeping bag.

Keep your tent well ventilated, with the doors and windows open at least 3" to prevent a buildup of frost on the walls and ceiling from exhaled moisture.



Don't sleep with your head completely inside your sleeping bag. Your breath is moist and will collect inside the bag to make you damp and cold. Wear a hooded sweatshirt or stocking cap and leave your face out of the bag. If it is very cold, wear a knit face mask.

Pack down the snow in the area where you will pitch your tent to avoid an uneven surface under your sleeping pad. Never clear away the snow, as the ground underneath will begin to thaw and become muddy.

To stay warm at night, put on dry clothes from the skin out. You may feel warm and dry in the clothes you have worn all day, but they are full of moisture which will cool down as you sleep and you will wake up cold and damp.

Air mattresses provide no insulation from the cold ground. Use closed cell foam pad or Thermarest pad instead.