



# Troop 35 WINTER CAMPING GUIDE



This guide has been written to prepare our scouts to comfortably experience the beauty and excitement of winter camping in temperatures ranging between -15 and +32 degrees Fahrenheit. Now that's some mighty cold weather...but, if the Scout is properly equipped, and mom and dad take some time to read this guide and discuss it with their son, we will all have lots of safe fun.

The Winter Camping Guide contains an equipment list and some tips for cold weather camping. Each campout may require some additional items, but this is the basic list. If the boy will pack for cold weather with these minimum items, he will be warm and comfortable.

## PERSONAL CAMPING EQUIPMENT

What should the boy have? The following minimum items are suggested for all campouts, regardless of weather:

Folding knife	Mess kit	Flashlight
Poncho	Ground cloth	Closed-cell foam ground pad
Water bottle or canteen	Metal cup	Matches in waterproof box
2 trash bags	Toilet paper	Nylon cord, 40-ft minimum
8 ft. x 12 ft. plastic ground cloth	Whistle	Compass

Back pack with a hip belt that preferably snaps together (as opposed to one with a buckle).

Sleeping bag -- do not get a down (feather) bag, when wet they will not keep the boy warm. Look for a qualofill or similar synthetic filling. An excellent bag contains Polargard. Bags are sold based on sleeping comfort temperature. Look for bag that has a temperature rating of at least "+15 degrees". A bag with a rating of "zero degree" or "-5 degrees" bag is even better. A mummy style is preferred to the open shoulder variety since you can seal a mummy bag around your face and keep cold air from entering the bag. If you watch for sales, a good bag will cost approximately \$80 and should last for many years with no problems. Call one of the adult leaders in the troop for advice before you make the investment if you are unfamiliar with sleeping bags.

Toilet kit -- Ivory soap (it floats), toothbrush, paste, washcloth, small towel, some safety pins, a couple of bandages, and an SOS pad for doing dishes.

Clothing -- will vary with the season. As a suggestion, long underwear, wool sweater, wool watch cap, wool socks (one pair for every night out), a change of clothes, and a jacket or coat for cold weather. We emphasize wool and a dry set of clothing for night wear because the greatest safety risk in camping is hypothermia which is often caused by going to bed in wet or sweaty clothes. The boys are instructed to get out of the clothes they hiked in all day, put on dry underwear and socks, and keep spare clothes dry. Wool is suggest because, even when wet, it will retain body warmth.

## WINTER CAMPING

For cold weather camping, ski trips, or survival training sessions, Scouts must take extra care in preparing their clothing and packs. This list will assist in packing and deciding what to bring or wear. **THIS IS A MINIMUM LIST.**

This secret to staying warm is creating air pockets between the skin and the outside by adding **layers** of clothing. As you begin to sweat or overheat, you remove layers. During cross-country skiing or hiking

activities you will overheat quickly and may end up travelling only in your light weight shirt. When you stop, the layers go back on as you cool down. Let's start by wearing the following:

### **CLOTHING TO WEAR**

- Long underwear, tops and bottoms.
- Two pairs of socks for each day (light weight Dacron inner and wool outer).
- Thermal boots. If not thermal, then add another pair of socks. Try boots on with three pairs of socks to make sure they fit comfortably.
- Trousers. Not jeans, they wick water and will shrink tight around the leg, robbing heat. Wool is recommended.
- Shirt. Wool or flannel with long sleeves and tail.
- Wool sweater.
- Windbreaker or parka with hood.
- Watch cap, or full face stocking cap.
- Wool inner gloves with waterproof outer mittens.
- Pocket knife. Tie a long colorful string to the knife so it does not get lost if dropped in the snow.
- Handkerchief.
- Scarf.
- Ski pants (optional)

Leave some room in your pack for these items as you peel off layers. Your windbreaker or parka can be hung over your backpack as you hike. Put small items, like gloves, in side pockets of your backpack for ready access.

### **BEDDING**

Comfort at night is the difference between misery and fun. There are three sources of misery: dampness from sweaty clothes, cold air coming into the bag around the head, and the cold ground beneath you which robs away heat. A winter quality bag is needed (+5 degree or better), or you can place a blanket inside a +15 degree bag. Inside the tent, you will want to put down your ground cloth and then the **closed-cell foam ground pad** which insulates you from the ground. You can add more insulation between the ground pad and the sleeping bag by opening up your jacket and putting it under you feet.

**Sleeping in dry clothes is very important.** You should change out of all of the clothes you wore during the day (even if you think these clothes are dry) and put on a dry set of clothes. Flannel pajamas, sweats, or another pair of long underwear are recommended. Clean wool socks should be used as well. These clothes should be used only for sleeping. It is recommended they be placed inside the sleeping bag and rolled with the bag for backpacking. The bag and ground pad should be securely tied to the pack frame.

### **INTO THE BACKPACK**

- Wool socks. At least two pair, one to wear, one to dry.
- Light weight Dacron socks - 2 pair.
- Extra pair of mittens.
- Poncho or raincoat.
- Toiletry kit.
- Chapstick in an outer pocket of pack.
- One SOS pad for every day out.
- Matches in waterproof container with dry tinder (dryer lint).
- Plumbers candle. This is a 1 inch diameter candle that will burn for about 8 hours. Great for lighting up a snow cave or starting a very wet wood fire but, **NEVER light a candle inside a tent.**
- Flashlight with alkaline batteries.
- Mess kit with knife, spoon, and fork.
- 1 qt. water bottle or canteen.
- Metal mug.
- Nylon parachute cord (40 feet).

- 3 large trash bags, one for trash and 2 to pack clothes in to keep dry.
- Whistle.
- Sunglasses or ski goggles.
- Sun screen if there is snow.
- Small first aid kit.
- Compass.
- Small note pad and pencil.
- Scout book (optional).
- A Frisbee. It's great for scooping out snow and building a snow cave.

Sounds like a lot of stuff to pack. To help out a little, put the soft items like clothes inside a plastic trash bag. Squeeze it or sit on it to force out the air, then seal the bag. It will fit in the backpack allowing more room for other stuff. You can also use ziplock bags which have been compressed. In no case should a Scout's pack be more than 1/3 of his body weight. A more ideal weight is 1/4th of the body weight.

### WINTER CAMPING TIPS

#### TIPS ON CLOTHING

- Wear clothes in layers which are loose fitting, trapping maximum dead air space.
- Avoid overheating by removing layers to prevent sweating. Sweaty clothes draw heat away from the body. After stopping an activity, let the body cool down and add layers back onto your body and you cool down.
- A wool cap is important because as much as 80% of the body's heat loss is through the head.
- Holofill II, Qualofill, Polargard, Wool, and Thinsulate are the best materials for winter gear and clothing.
- Mittens are better than gloves because your fingers can share the heat. A good substitute are wool inserts for gloves.
- Wear bright colored clothing so you can be seen more easily in the snow and woods.
- The best dressed camper wears long underwear (tops & bottoms), wool shirt, wool pants, a wool sweater, a pair of wool socks over a pair of Dacron socks, thermal boots, a wool cap, mittens, and a parka or wind breaker with a hood. While an L.L. Bean parka with 6 inches of down fill will keep you toasty when you're inactive, it will also sweat you to death when you're active. **The secret is layers, layers, layers, and more layers.**
- If walking long distances, change into fresh socks at the campsite.
- **Never sleep in the clothes you wore during the day.** Change into dry clothes for bed.

#### TIPS ON BEDDING

- If you don't have a good sleeping bag, consider taking two, with one inside the other. Or you can use a wool blanket.
- Shake your sleeping bag vigorously as you spread it out. Allow at least an hour to let the loft (the height of the bag caused by the fibers as they separate to create dead air pockets) return to the bag.
- Use a closed-cell foam sleeping pad for insulation and a ground cloth to keep out moisture under the bag and ground pad. Additional insulation from the ground can be gained by placing your dirty clothes under the ground pad, and your opened jacket between the ground pad and the sleeping bag. You can also zip up your jacket and stick the foot of the sleeping bag inside, keeping your feet warmer.
- Do not cover your sleeping bag with a plastic cloth, poncho, or tarp. The sleeping bag must breathe to let body moisture escape. Covering the bag will cause water vapor to condense and you will be chilled in your bag.
- Don't close up the tent completely. Leave vents open to circulate air and remove water vapor from your breath. With two boys in a closed tent, ice will form on the ceiling of the tent if it is not ventilated.

## TIPS ON THE PACK

- Pack your pack like it says in the Scout Handbook with heavy items high on the pack and closest to your back. However, for cross country skiing, it is necessary to lower the center of gravity and pack heavy items near the small of the back.
- Try on all of your clothes and adjust the pack straps before you go on the campout. Know how to tighten down your own straps as you remove clothing.
- Gear not in the pack needs to be will secured to the pack frame. Learn how to tie a trucker's hitch or other knots you can untie when your hands are cold. Nothing should swing or bounce, it will throw you off balance on icy trails.
- Load gear in reverse order of need, first thing needed goes on the top or outside pockets.
- Put all clothing inside trash bags to keep dry and to keep wet clothes from soaking dry clothes. You will need at least 2 plastic bags.
- Know where your gear is in the pack. Always pack the same things in the same pockets.
- Leave some room in your pack for food, troop gear, and clothing you take off as you heat up.

## OUTDOOR TIPS

- The buddy system **ALWAYS** applies in snow and rugged terrain, day and night. Whistles are carried by at least one of the buddies.
- Keep moving to stay warm, this includes while standing around the campfire. Move your feet to keep good circulation. Move your toes frequently, and don't expose your bare skin to the elements unless necessary.
- Always try to take shelter out of the wind, even if just behind a tree. A 15 mile-per-hour wind at 5 degrees is the same as -25 degrees, a condition frequently found at many ski areas.
- Never have open flames (candles, stoves, Sterno cans, or heaters) in your tent. Fire will kill you faster than the cold. The nylon fabric used for tents and sleeping bags can burst into flames. In a properly vented snow cave, a single candle can be used for both light and heat.
- Know the signs of hypothermia and frostbite and watch out for your buddy.
- Keep your canteen in your sleeping bag at night so water does not freeze. Make sure the lid is on tight before placing it in the bag.
- Your boots will freeze at night. Be sure to either place them under your sleeping bag so they won't freeze, or make sure they are opened up so you can get your feet in them in the morning. Do not put them inside your bag.
- Use snow to your advantage. It is an excellent insulator and can make a windbreak. Pitch your tent so the door is perpendicular to the snow drifts so that snow will not drift into the door.
- Compacted snow makes an excellent shelf or chair, but please sit on an insulating material so you do not get wet or cold.
- Depending on outside air temperature, your body heat may melt the snow beneath the tent. Be sure that the snow is well compacted before pitching the tent, or you will find yourself settling into a pool of water. Use your ground cloth on the inside of the tent to keep dry from snow melt.

## TIPS ON FOOD

- You burn more calories in cold weather. You will need to consume approximately 5,000 calories per day when in the cold. You can either carry lots of your favorite food, or switch to foods high in carbohydrates and fats. Plan on eating 50% more food on a cold weather campout. Pastas, rice, and sauces with margarine make excellent meals for cold weather. Trail mix with nuts, raisins, and chocolate chips make an excellent instant energy source.
- Drink lots of water. In cold weather you need to force yourself to drink at least 3 quarts of water a day (4 quarts for adults). This is one of the reasons for having soups for lunch and dinner, increasing the water content. You can get dehydrated easily on cold weather campouts. The best way to monitor your water intake is to check on the color of your urine. A deep yellow color, or infrequent urination indicates the need for more liquid.
- Eat a chocolate bar before going to bed; it gives you instant energy to heat your body in the night.
- Keep meals simple and with lots of liquid. Soups, pasta, stews, hot chocolate, heavy breads, rice dishes. Leave the hot dogs and hamburgers home.

- Everything freezes, you can thaw canned goods and food in plastic containers by immersing in boiling water.
- If you are the morning cook, you will want to fill several pots with water and cover them with foil before you go to bed. When you get up in the morning, add a little water from your canteen to the block of ice in the pot and then heat slowly until the water begins to melt. Snow heated to make water must also have water added, or it will produce water with a burned taste. Remember to purify the water by boiling to a rolling boil for a minimum of 5 minutes.
- All pots should have lids or foil covers in order to reduce the time it takes to heat the food or water and to help keep the food warm.

### **COLD WEATHER HEALTH HAZARDS**

You should know the symptoms of frostbite and hypothermia. Both conditions are prevented by being alert to the onset of a problem. More people die from hypothermia than any other cold weather condition. Frostbite can cause permanent damage, especially to toes and fingers.

#### **FROSTBITE**

- Freezing of the skin tissue. Look for patches of white skin. If the pink of the flesh is gone, beware. Look out for your buddy. Most frostbite occurs on toes, fingers, and the nose.
- Signs of frostbite include white patches of skin, numbness, loss of pink color under fingers and toe nails.
- If you can't feel your toes when you wiggle them, chances are you have the early signs of frostbite.
- Watch for these signs and have your buddy watch for them on your nose and ears.
- Don't put frostbitten skin into hot water or rub the surface, it can damage the frozen tissue. Warm the skin slowly. Place hands under armpits. For feet, place bare feet on your buddy's warm body. As the skin thaws, feeling will begin to return as circulation is restored. Have a doctor check the skin damage upon returning from the campout.
- Prevention is the best approach. Keep the skin covered, wiggle toes and fingers, rub your hands together, stick your nose into the top of your shirt, using your warm breath to warm the nose.

#### **HYPOTHERMIA**

The simplest but most important concept in winter camping is to stay dry and warm. Life is like a fire, it needs a constant supply of fuel to keep burning. When the fuel is depleted, or gets wet from the environment, the fire will produce less heat and eventually go out. The same is true of your body. Hypothermia (exposure) is a dangerously cooled body condition. Wet clothing or contact with cold objects increase the loss of body heat. Your body's fire is about to go out. It is caused by a number of conditions, including exposure to wind and rain, body contact with cold objects, unusual exertion, and lack of food. Boy Scouts rarely lack food on campouts but the other conditions are commonly encountered. The most likely way a Scout will suffer from hypothermia is either being drenched by rain, falling into icy water, **or going to bed with wet, sweaty clothing on.**

You can avoid hypothermia by following these simple rules:

- Stay out of wind and rain, seek shelter.
- Don't sit or lay on cold rocks, ground or snow, place some insulation under you so your body's heat is not robbed by contact with cold objects.
- Conserve your energy, especially in a survival situation.
- Avoid overheating, take off clothing layers to regulate body heat to minimize sweating. A body sweats to release excess heat. If you are sweating, it is easier to slow down the pace, remove clothing layers, and then increase the pace after you stop sweating. Sweat moisture in clothing will increase body heat loss.
- Eat plenty of food and drink extra liquids.
- Stay dry and sleep in dry clothing.

Recognize the symptoms of hypothermia. Fatigue, shivering, purple lips, teeth chattering, stumbling, slurred speech, disorientation, hallucination, blue skin (first appearing under the finger or toe nails), and drowsiness. Watch for wanting to give up whatever you are doing. It is easy to understand why campers die in their sleeping bag. Hypothermia makes you feel tired, you shiver in your wet clothes inside your bag, you get drowsy, go to sleep and then your body's flame goes out. Just as it is easier to keep a fire going than to build a new one, it is easier to prevent hypothermia than to cure it. Controlling hypothermia will require the help of another person. Someone with hypothermia is unable to recognize the signs or what to do.

The following steps should be taken to treat someone suffering from hypothermia:

- Strip off wet clothing and dry the victim.
- Get the victim into a dry sleeping bag. Use blankets or many layers of dry clothing from other members of the troop if no dry bag is available. Have his buddy take off his outer clothing and climb in the bag with the victim, sharing his body heat with the victim.
- Provide body shelter with a tent, tarp, lean-to, or by making a shelter if necessary.
- Start a fire to dry clothing and to warm dry clothing and blankets.
- Warm liquids are not helpful. Do not give alcohol.
- Don't let the victim fall asleep.
- The objective is to increase the body temperature through warming. You can add warm rocks wrapped in a cloth into the sleeping bag to increase heating.
- Once the victim starts showing signs of recovery (color is returning and they are more coherent), then warm liquids can be given.

### **SNOW BLINDNESS**

Snow blindness is caused by reflection of light from the snow. It is prevented by wearing ski goggles or sunglasses which blocks ultraviolet light. If you become snow blind, bathe eyes with warm water with a wet cloth. Do not use eye drops. Keep eyes covered - do not expose to light. Improvement should occur within 24 hours. Do not allow the victim to be exposed to bright light or the condition will return.

### **SUNBURN**

Since snow reflects ultraviolet light, you can get a serious sunburn. Use sunscreen or cover exposed skin.

### **DEHYDRATION**

Camping in cold requires your body to use more water to produce fuel to keep the body warm. If you are active, such as hiking or skiing, you will sweat and lose water. You may not even realize you are getting dehydrated. The first signs will be the inability to spit and dryness in the mouth. Force yourself to drink a minimum of 3 quarts of liquid. That's three full canteens, or 12 cups of hot chocolate -- a lot of liquid. Adults and larger boys need four quarts. **Drink and drink often.**

### **DO NOT EAT SNOW**

Snow should not be eaten because it uses more energy for your body to warm the snow than is worthwhile. Snow should be melted and boiled to purify before drinking. Water should be drunk while still warm. All snow should be considered impure. After boiling, it will taste flat because the air has been driven out of the water. You can improve taste by shaking the water in your canteen.

**REMEMBER, IN COLD WEATHER CAMPING YOU NEED TO UNDERSTAND THE HAZARDS AND YOU HAVE THE ADDED RESPONSIBILITY TO KEEP AN EYE ON YOUR BUDDIES. TELL THE SCOUTMASTER IF YOU THINK ANOTHER SCOUT IS IN THE EARLY STAGES OF HYPOTHERMIA.**

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