



Winter Camping Guide

Cold weather camping represents one of the greatest challenges that a Scout will face in his Scouting career. With the proper planning, this challenge can be easily met. Without proper planning, that challenge could prove to be a serious defeat. The knowledge that a Scout holds regarding winter camping will be instrumental in his success. The following pages are full of cold weather camping and cold weather outing tips. Scouts are highly encouraged to review this document before every cold weather trip.

The most common errors people make during cold-weather activities include not eating the right kinds of food, not drinking enough water, not having adequate clothing, and being unaware of the signs of frostnip and frostbite.

The following is considered mandatory:

- Cold weather headgear: Hat, full face mask type hat, hood on the jacket, scarf, neck warmer. Recommend extra hat.
- Footwear: Insulated and waterproof boots. Sneakers will not be allowed. If a Scout shows for the trip wearing inappropriate footwear, he will be sent home.
- Hand gear. Gloves or mittens or both. Minimum 2 pair. No cotton gloves.
- Extra socks, minimum 2 pair per day. Wool or Synthetic. No Cotton.
- Synthetic long underwear.
- At least 1 Extra blanket.
- Sleeping bag with a rating no higher than 20 degrees. A zero degree, mummy style bag is highly recommended.
- Sleeping bag pad, closed cell foam pad recommended.
- Large plastic bottle with a large opening and screw cap. Nalgene style works well.
- Avoid wearing jeans. Once they get wet, they lose their insulation value. Wool or other synthetics are best. Snow pants over your trousers will help keep you dry and warm.
- Make sure that you have a good knowledge of the signs of frostbite and hypothermia. You should be able to recognize it in others and in yourself. Tell someone right away if you or another scout is showing signs of cold-related problems.
- Stay hydrated. It's easy to get dehydrated in the winter. Eat and drink plenty of carbs.
- Always be at least with one buddy, never alone.

Types of Cold

- Wet cold: 50° F to 14° F. The most dangerous. Wide temperature variations from melting during the day to freezing at night makes proper dressing difficult, and important. Damp conditions from melting snow or rain makes keeping dry difficult. These are the most common type of conditions our Troop is likely to encounter.
- Dry cold: 14° F to -20° F Ground is frozen and snow is dry and crystallized. Strong winds cause the most concern with keeping warm. Extra clothing layers and wind-proof outer garments should be added.
- Arctic cold: below -20° F Requires the most insulation and wind-proofing. Many materials change physical properties, becoming brittle. Only for the most experienced campers.

Watch for Frostnip and Hypothermia

Keep an eye on friends and fellow campers. If the areas around the eyes and lips, or the lips themselves, begin to turn grayish white, the person may be experiencing frostnip. Signs of confusion, inaction, and

shivering are all progressive signs of hypothermia (overexposure to winter elements). If you get cold, huddle up or sit by the fire. Action and movement will also stimulate blood flow and distribute warmth throughout the body.

Clothing

Proper dress for cold weather camping is an absolute must for keeping warm and dry in order to have an enjoyable camping experience. **AVOID COTTON!** Cotton holds onto moisture, keeping it close to the skin, and thereby losing all insulation value. Perspiration which would normally drip off the body is absorbed by the cotton keeping it close to the skin, further cooling the body. This could easily mean the difference between comfort and hypothermia. "Thermal" undershirts found at department stores are almost always 100% or 50% cotton. Go to the sports department and look for polypropylene. Most man-made fibers and wool will wick moisture away from the skin.

Layer like an onion to stay warm and comfortable. Air is an excellent insulator and by wearing several layers of clothes you will keep warm. For this system to work, it's imperative that each piece of clothing be sufficiently large so that every item can be worn at once, in any order, in the worst of conditions. When you're active, wear only those layers needed to stay comfortable. As you cool down, add a layer. If you feel yourself heating up, simply remove a layer before you start to sweat. Always pack a little more than you think you'll need.

Don't Get Left Out in the C.O.L.D.

- C Clean - dirty clothes lose their loft and get you cold.
- O Overheat - never get sweaty, strip off layers to stay warm but no too hot.
- L Layers - Dress in synthetic layers for easy temperature control.
- D Dry - wet clothes (and sleeping bags) also lose their insulation.

Remember the 3 W's of Layering

- 1) Wicking inside layer
- 2) Warmth middle layer(s)
- 3) Wind/Water outer layer

Under Layer/Underwear – Inside Layer

The innermost layer must wick perspiration from the skin and transport it to an adjacent, outer layer. For this to occur, the wicking layer must be very thin and in direct contact with the skin. Look for underwear tops and bottoms, face masks, liner socks, and liner gloves made from polypropylene, Capilene, Coolmax, Dryskin, Powerdry, Thermastat, and Thermax.

Insulating Layer – Middle Layer

The middle, insulating layer traps air and restricts its circulation. This layer keeps you warm. Remember, several thin garments are warmer and more flexible than a single thick layer. It also makes it easier to regulate temperature if you get too warm by being able to remove some layers.

Since cotton and down are very poor insulators when wet, look for pants, shirts, sweaters, jackets, vests, socks, hats, and mittens made from wool, piles and fleeces, and fiber fills.

Outer Layer/Shell – Wind/Water Outer Layer

The outer shell layer protects you from the wind, rain, and snow. For the upper body, a parka with a hood as well as wrist and waist closures is best. Pants with waist and ankle closures work well to protect the lower body. Both of these garments should be sufficiently oversized so they'll fit over all of the insulating layers when they're worn at once in extremely cold weather. Breathable, windproof shell garments are often constructed of Ripstop, Supplex, Taslan, Versatech, etc. Waterproof and breathable shells are typically made from Gore-Tex, the industry standard. If nothing else, the outer shell should at least be 60/40 nylon.

Hat...A MUST!!!

Always carry a thin polypropylene balaclava (or face mask) as well as two warm hats as you can lose from 50 to 70 percent of your body heat through an uncovered head.

Hands & Feet

To keep from losing what little heat reaches your hands, use a layered mitten system consisting of polypro glove liners, one or two insulating mittens, and mitten shells. Get mittens with long cuffs. These keep hands much warmer than gloves. The cuffs should extend past the wrist.

"Glomitts" are finger-less wool gloves with the finger part of a mitten attached to the back of the knuckles. Normally the mitten is over the fingers, but when it comes time to fiddle with the stove, or even light a match, the mitten part flips up and Velcro's to the back of the glove.

Under the mitten wear some type of thin acrylic knit gloves. You can either buy glove liners at an outdoor store or go to the women's section of some discount department store like Walmart. Look for the one-size fits all mini-gloves for around a buck. They work fine for a fraction of the cost of an "official" glove liner.

To keep your feet warm, wear one or two pairs of thick insulating socks over a pair of polypro liner socks inside waterproof boots. No matter what type of footwear you use, make sure they don't fit too tight. If your feet lack wiggle room, remove a pair of socks. Adequate circulation is essential as tight footwear means cold feet. You can also use plastic grocery bags or bread bags over socks. This keeps your boots dry and you can easily change those wet socks.

Sleeping

Natural fiber sleeping bags and down bags do not maintain their insulation properties when damp. A synthetic bag will take care of most of your needs. A mummy style bag is warmer than a rectangular, as there is less space for your body to heat. Also, most mummy bags have a hood to help protect your head. If you only have a rectangular sleeping bag, bring an extra blanket to pack around your shoulders in the opening to keep air from getting in. Two +20°F sleeping bags, one inside the other will work to lower the rating of both bags.

Don't burrow in - keep your mouth and nose outside the bag. Moisture from your breath collecting in your bag is a quick way to get real cold. Keep the inside of the bag dry. Remember to air out your sleeping bag and tent, when weather permits. Perspiration and breath condense in the tent at night and the water will reduce insulating properties of your bag.

Don't sleep directly on the ground; insulate yourself from the ground as much as possible to avoid cold spots at the shoulders and hips. Use a sleeping pad or better yet, a ½ -inch thick closed cell foam. Use more than one insulating layer below you – it's easy to slide off the first one. Many experienced winter campers add a second ¾-length pad for extremely cold temperatures. Use a ground cloth to keep ground moisture from your bag. Your body will warm up frozen ground to a point where moisture can become an issue. A bag liner made from an old blanket, preferably wool, will greatly enhance the bags warmth. No cots or air mattresses! Better to lay on with 30° earth instead of -10° air.

Hang your sleeping bag up or just lay it out, between trips, so the filling will not compress and lose its insulating properties.

Clothing for Sleeping

Always change into dry clothing before you go to bed. Put on dry clothing or pajamas before entering the sleeping bag. During colder periods, wear additional synthetic-insulated layers of clothing to extend the comfort range of your sleeping bag. Adding additional layers will only work if they fit loosely on you and in the bag itself.

Wear a hat to keep your head warm and reduce heat loss. Wear a loose fitting hooded pull over type sweatshirt to sleep in.

Cold feet make it difficult to sleep. Wear two pairs of thick, dry socks. Put a hand warmer (in a sock) at the foot of your sleeping bag before getting into it. Some of the toe/hand warmers will last 8 hours.

If possible, fill a couple of Nalgene water bottles with warm water and sleep with one between your legs (warms the femoral artery) and with one at your feet.

Put on tomorrow's t-shirt and underwear at bedtime. That way you won't be starting with everything cold next to your skin in the morning.

Put tomorrow's clothes in your bag with you. This is especially important if you're small of stature. It can be pretty hard to warm up a big bag with a little body, the clothes cut down on that work. Plus tomorrow's clothes won't be cold when you go to put them on.

Eat a high-energy snack before bed, and then brush your teeth. The extra fuel will help your body stay warm. Take a Snickers bar or similar to bed and eat it if you wake up chilly in the night.

Exercise before bedding down to increase body heat. This will help to warm your bag quicker. Be careful not to start perspiring.

More Tips & Tricks to Consider

- Be dry by sundown. No wet (sweaty) bodies or wet inner clothing.
- Keep your hands and feet warm. Your body will always protect the core, so if your hands and feet are warm, your core will also likely be warm. If your hands or feet are cold, put on more layers, and put on a hat!
- All underwear, socks, and long underwear should be packed in zip-lock bags. Dryness is the key to success!
- Drink WATER. It's easy to get dehydrated in the winter. You aren't visibly sweating, so you don't think to drink water, but since the air is so dry, you lose a LOT of water through breathing. Drink lots of water! Stay away from caffeinated drinks such as soda, coffee, and tea.
- Food consumption should include sugars, carbohydrates, proteins, and fats. Consider bringing extra food that doesn't need to be heated or cooked. Granola bars, trail mix, etc.
- Drain your bladder before you go to bed. Having to go in the middle of the night when it's 5 degrees out chills your entire body. Drink all day, but stop one hour before bed.
- Place an empty capped plastic bottle outside your tent door if you do have to deal with "night calls." This will reduce your exposure when you have to answer that call. Remember to empty the bottle away from the camp in the morning.
- Put a couple of long-lasting hand warmers into your boots after you take them off. Your boots will dry out during the night.
- If possible, build a wind break outside your tent by piling up snow or leaves to a height sufficient to protect you when lying down.
- For strong winds, a rain fly for a tent can be pitched to serve as a wind break. The wind chill factor can often be considerable and can result in effective temperatures being much lower than nominal.

- Use a bivy sack to wrap around your sleeping bag. You can make a cheap version of this by getting an inexpensive fleece sleeping bag. It isn't much more than a blanket with a zipper but it helps lower the rating by as much as 10 degrees.
- Consider using a sleeping bag liner. There are silk and fleece liners that go inside the sleeping bag. They will lower your sleeping bag's rating by up to 10 degrees. Or buy an inexpensive fleece throw or blanket and wrap yourself in it inside the sleeping bag.
- Most cold weather bags are designed to trap heat. The proper way to do this is to pull the drawstrings until the sleeping bag is around your face, not around your neck. If the bag also has a draft harness make sure to use it above the shoulders and it snugs up to your neck to keep cold air from coming in and warm air from going out.
- Put a trash bag over the bottom half of your sleeping bag to help hold in the heat. A zipped up coat pulled over the foot of a sleeping bag also makes an extra layer of insulation.
- Bring a piece of cardboard to stand on when changing clothes. This will help keep your feet warmer than standing on the cold ground.
- A space blanket or silver lined tarp on the floor of the tent or under your sleeping bag will reflect your heat back to you.
- Leave the tent flaps/zippers vented a bit, it cuts down on interior frost.
- Before leaving for the campout, fill a non-breakable thermos with a hot drink: Hot cocoa, tea, etc.