

Cold Weather Clothing
BSA Troop 204
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<http://www.bsa204.com>

I. Layering

A. You should dress in three general layers.

1. Wicking layer – This layer transports moisture (perspiration) away from the skin as efficiently as possible.
2. Insulating layer – This is the layer where you are trapping body heat, while allowing perspiration to escape.
3. Shell layer – The outer layer is a shell is to stop wind and moisture. This layer should still allow moisture (perspiration) to escape.
4. Waterproof or water resistant layer such as rain gear when required.

II. The Layers

A. Underwear and t-shirt; fresh underwear daily will help you stay warmer. Any clothes worn against the skin will become damp and will be colder than fresh, dry, clothes. The t-shirt should be long enough to tuck in and remain in while being active.

B. Inner or liner socks, thin and moisture wicking, Polypropylene, Coolmax™, etc.

C. Thermal Underwear, top and bottom. Pull bottoms on over inner socks and tuck t-shirt in. Thermal top should be long enough to tuck into pants and remain in while being active.

D. Outer sock; knee length uniform socks pulled up over the thermal bottoms or wool class c socks.

E. Long sleeve uniform shirt or class c long sleeve shirt.

F. Long uniform pants or class c long pants. Tuck shirt and thermal top into pants. By tucking items in this manner you will create an overlapping wind/heat loss stop.

1. Long wool pants in the same color as Scout pants are available from Army/Navy surplus stores. These are seasonal items and will be available during the next several months. “*Army/Navy Discount*” behind the Coke plant carries these items and offers a 10% discount on some items to Scouts and Scouters.

G. Boots, ***NO tennis shoes or sneakers***, they won’t keep your feet warm and dry. Shoes with thick soles will keep you warmer by insulating you from the cold ground.

H. Winter coat with zip out liner.

1. Outer shell should be water proof or water resistant.
2. Coat should fit correctly. If it is tight, it will compress the air spaces that provide insulation. If it is too loose, it provides too much air space for your body to heat and will allow in drafts.

I. Balaclava to protect the face or a scarf to protect the neck.

J. Ear Muffs

K. Chap Stick; you are more prone to chapped lips in cold weather.

L. Goggles (for extreme cold) Ski goggles that fit over glasses will help to keep your eyes protected.

M. Gloves

1. Fur lined or insulated gloves.
2. Thin inner glove with insulated outer glove or mitten. This will allow you to do standard camp chores without exposing bare skin to the cold.
3. **DO NOT ATTEMPT TO USE STANDARD GLOVES INSTEAD OF FIRE GLOVES OR COAL PLIERS WHEN COOKING OR FIRE BUILDING!!!**
4. Outer glove should be water proof or water resistant. Wet gloves will not keep your hands warm.
5. Carry more than one pair of gloves. Gloves tend to get wet just doing normal camp chores. Wet gloves will not keep your hands warm. Have an extra pair, to allow your wet/damp pair to dry.

N. Head cover (most of your body heat escapes through your head).

1. Scout Wool Beret
2. Suitable class c hat
3. Toboggan
4. In rainy weather, a wide brimmed hat that will shed water without it going down the back of your neck will be desirable.

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Page 2 of 2

III. Optional Extras

- A. Daypack or book bag instead of fanny pack to take on hikes. This will give you someplace to place a layer if you have to remove it to avoid overheating. You can also carry unneeded layers at the start of an outing in case the temperature drops unexpectedly.
- B. Catalytic Hand Warmers; these are sold at most sporting goods stores and will provide a warm spot, especially for the hands. They can be carried in an easily accessible pocket or actually slipped inside a pair of gloves.
- C. Survival kit/equipment add-ons for cold weather; these might not fit inside your standard survival kit but could be easily carried in the daypack mentioned above.
 - 1. Space blanket
 - 2. Chap Stick
 - 3. Hot drink mixes such as tea or hot chocolate.
- D. Poncho – a poncho can be worn to keep you dry and to block out a cold cutting wind. If you are backpacking, get a poncho large enough to cover your backpack. Not to keep it warm, but to keep it dry. Wet backpacks are very heavy.
- E. A foam pad to sit on to insulate your rear end from the cold ground when it is necessary for you to sit down.

IV. Important Hints

- A. Anything that can get wet easily, such as cotton, will make you loose heat faster.
- B. STAY DRY.
- C. Mittens keep your hands warmer than gloves.
- D. DO NOT OVERHEAT.
 - 1. If you overheat you will sweat which will turn cold against your skin. In extreme cases, sweat has been known to freeze against the skin.
 - 2. If you are getting hot you can cool off in several ways
 - a. Unzip your outer layer partially to allow your heat to “vent” out the opening. Clothing designed for rugged outdoor use also has adjustable cuffs to further allow venting or gasketing over gloves. Consider adding an easy to grasp lanyard to all of your jacket’s zippers to make them easy to adjust without removing your gloves.
 - b. Remove a layer from your torso. This may involve removing the “zip out” liner or if the jacket is designed for it, removing the outer shell and just wearing the liner. Keep in mind the water repellent properties of the liner.
 - c. Temporarily remove your head cover. You will cool down quickly but be careful not to cool down too much. In extreme cold this will work best if removing your headgear does not remove your ear protection.
 - d. If you are just a little cool before you start an activity such as hiking, you will probably be just right once you get started and begin heating up.
- F. Do not leave your boots outside your tent at night. Night dew, snow, ice or rain will make them unwearable the next morning.
- G. If your boots or gloves get wet, be very careful drying them over or next to a fire. Too much heat can burn, char, melt and otherwise ruin them.
- H. Protect your canteen or water bottle from freezing.

V. References and Web Sites

- A. A technical explanation of cold weather clothing design:
http://www.umanitoba.ca/faculties/physed/research/people/giesbrecht/Cold_Weather_Clothing.pdf
- B. The military’s view of cold weather operations:
<http://www.vnh.org/ColdWeatherOperations/depcold/toc.html>
- C. A medical Websites view;
<http://www.advocatehealth.com/system/info/library/articles/fitness/extreme/fitcold.html>
- D. A Collegiate view; <http://www.ag.ncat.edu/press/feb97/coldgea.htm>.
- E. A Power Point presentation for military training; <http://ppt.armystudyguide.com/safety/9.htm>
- F. Hints from a winter time camper; <http://www.abovethetreeswilderness.com/drescold.htm>
You can find many other sources by going to your favorite search engine and entering the phrase “cold weather clothing”.