

The "Shake-down" Before Winter Camping

A. Check for knowledge of key ideas to insure that the Scout has the basic knowledge to keep himself warm enough to enjoy a Winter campout

1. He is the source of warmth. Clothing merely traps body heat; it does not create heat.

2. Still ("dead") air = insulation (traps body heat).

Therefore:

➤ Keep dry.

➤ Moisture-filled space is not air.

➤ ALSO evaporating water (liquid water turning into water vapor or gas) causes cooling of the surface from which evaporation takes place. This is why cotton is no good in Winter clothing. It holds moisture against the skin where the water evaporates and cools.

➤ Have a wind-blocking outer layer. Wind causes the air trapped in your clothing to move, defeating the insulating properties of still air

➤ Dress in layers.

Because:

➤ Air is trapped between the layers

➤ Layers allow shedding insulation to prevent sweating (Keep dry!)

➤ Clothing (especially socks) should not be tight. Tight = air squeezed out = no insulation.

➤ Keep clean (a tough one). Dirt-filled spaces are not still air.

3. The feet, hands, and ears are the danger areas for cold injury.

4. "The best way to be warm is to stay warm." Don't let your feet or hands become really cold in the first place. Do something to improve the situation before you get really cold. It's better to get in your sleeping bag than to be miserable.

B. Inspect to see that the Scout has the correct gear for the expected weather.

The Scout presents himself with the gear he proposes to use on the campout and the leader inspects the gear to see that it is adequate -> within the range of the acceptable. Check five areas:

1. Head: Awake or asleep, the Scout will lose about 50% of his body's heat if his head is left uncovered. The Scout must have a hat or cap which covers the ears and back of the neck -- or more. A scarf helps. A hooded outer garment is desirable in really cold weather.

2. Torso: This area is where the body creates heat. If too much is lost, there is nothing to go to the hands and feet. The Scout must present the proper clothing.

➤ INNER LAYER - POLYPROPYLENE or POLYESTER is best. THERMAL or FISHNET of 50/50 poly/cotton blend is OK as is anything wool.

➤ MIDDLE LAYERS - POLYESTER fleece, pile, quilting or bunting is excellent as is THINSULATE. WOOL is good. ACRYLIC is OK.

➤ OUTER LAYER - to repel wind and water or wet snow. Nylon, polyester or tightly-woven polyester/cotton. (**Really** cold? Outer garment may be insulated.) Must be large enough to allow room for insulation underneath. Nylon or polyester running pants are good.

* NOTE - Tightly woven, heavy wool is good for outer and middle layers except in severe wind.

Wind-resistance may be tested by trying to blow through the fabric or seeing if light shines through it. If you can easily blow through it or see light through it, it will not stop the wind very well. Most wind-

blocking layers today are made of nylon. Some are made of polyester that looks like nylon. Fleece does not stop wind by itself, and a "wind-block" inside the fleece is in the wrong place. The wind barrier needs to be on the outside to trap the air in the fleece.

TOTALLY AIR-TIGHT MATERIALS TRAP BODY MOISTURE AND THE SCOUT GETS WET!!
Rain suits made of a non-breathable material are not unacceptable. Ponchos allow ventilation.

3. Lower body. See comments on torso, above.

There is a common problems of Scouts expecting to wear "sweat pants" or "jeans." Sweat pants do not stop the wind. "Jeans" or "Levi's" are not wind-resistant, and are usually too tight to allow loose layers of insulation. Loosely-fitting nylon running pants are a good solution. Tightly-woven 50/50 cotton/polyester "work pants" are adequate if loose enough to leave room for insulation layers. "Snow suits" may be too warm for anything beyond sitting around.

4. Feet. **The biggest source of problems for Scout winter campers in our cold and wet winters.**

Leather is NOT the material of choice for cold wet conditions. If the Scout has leather boots, you must insure that they are waterPROOF leather. Try them out under a tap.

Better are shoepacs with rubber bottoms and leather, nylon or rubber tops and a liner of felt, Thinsulate or heavy socks. Gore-Tex is great but expensive.

SOCKS should be wool, polyester, acrylic or blends of these. **NO 100% COTTON!!** Carry several extras! (The Russian Army uses squares of blanket material instead.) Polypropylene or polyester liners are super, since they wick moisture away from the skin and don't irritate sensitive skin.

DON'T CRAM IN "EXTRA" SOCKS WHEN IT RESULTS IN A TIGHT FIT. YOU CRUSH OUT AIR (INSULATION) AND RESTRICT BLOOD CIRCULATION (HEAT) TO THE FEET. (Can't afford new winter boots? See p.2 on "Vapor Barriers.")

A plastic bag over the foot, followed by thick socks, followed by a second plastic bag keeps cold outside moisture out and socks dry. This "sock sandwich" produces a swamp, but it's a warm swamp so long as the Scout is active and the bags don't have leaks. When activity stops, towel off feet and put socks back on.

5. Sleeping bags. The sleeping bag is no more than a special type of clothing to keep the camper comfortably warm when sleeping or otherwise necessary.

DESIGN - Look for a design that prevents drafts and provides sufficient loft.

➤ "LOFT" is simply a word for thickness of insulation (trapped dead air). The U.S. Army says the following loft is the minimum needed to keep the average, healthy sleeper reasonably warm inside a tent or shelter. Figures are for the total thickness of the bag (or combined bags and blankets) and assume that about 1/2 of the bag is above the sleeper and 1/2 underneath. For comfort, add 1" of top loft.

LOW TEMP.	LOW LOFT	LOW TEMP.	LOW LOFT	LOW TEMP.	LOW LOFT	LOW TEMP.	LOW LOFT
40	3.00"	20	4.00"	0	5.00"	-20	6.00"
30	3.50"	10	4.50"	-10	5.50"	-30	6.50"

➤ A bag which fits closer to the body means less space to heat. A **hood** which can be drawn close around the head (or blankets to do the same) prevents loss of heat from the bag and insulates the head. **Double offset quilting** greatly increases insulating value for the same weight of filler. A **draft tube** full of insulation behind the

zipper is important.

MATERIAL

➤ Fill - all fillers (stuffing) are not equal. Quallofil, Hollofil II, Kodofil, Loftguard and Polarguard are superior to Hollofil 808, which is superior to generic polyester, which is better than acrylic or "textile waste."

➤ Zippers - should be durable, preferably of nylon or similar plastic since these materials do not freeze and do not cut bag fabric if a run-on (snag) occurs. (As a design matters, a longer zipper allows more ventilation and extends the temperature range of the bag.)

➤ Covers and liners - should be of tightly woven nylon or polyester or blend of manmade fibers. **AVOID COTTON !!!!!** (Cold, stays wet when it gets wet, and wears out too fast.)

A BIG "AND"

➤ The Scout must have some insulation for under the bag which will not compress much under body weight. Closed-cell foam pads or foam-filled air mattresses are best. In a pinch, several layers of blankets, cardboard or many layers of newspaper will work if kept dry. **DON'T IGNORE THIS POINT !!!!!**

Try to determine if the Scout is learning. The goal is knowledge and understanding. **Be respectful**. Embarrassing the Scout is a poor basis for learning and violates the Scout Law.

NOTES
