

BOY SCOUTS  OF AMERICA®



February 12-14, 2010

CAMP TAHOSA

Hosted by Troop 770, Centennial, Colorado

KLONDOREE

Klondoree is a winter camping and inter-troop competition event for Arapahoe District Troops plus Troop-sponsored second year Webelos Scouts (SATURDAY ONLY).

HOST TROOP

Troop 770 of Centennial, CO

Scoutmaster: Dave Anderson, 303-756-4486, David.Anderson@eeiengineers.com

Committee Chairman: Dan Bertram, 303-850-7748, jcb1drb@yahoo.com

WHEN

February 12 – 14, 2010; Friday - Sunday

Check-in

- From 3:30 p.m. to 8:00 p.m. on Friday; and 7 a.m. to 9 a.m. on Saturday for Webelos and late arrivals. Early check-in may assist you in finding a premium campsite. No unit should arrive before 3:30 p.m.
- Check-in materials YOU must present:
 1. A Klondoree Unit Registration Receipt from Double Knot.
 2. Medical Forms (the DAC Class 1 basic health form). Your unit will keep these, we'll check only to see that you brought them. You must bring a copy for every scout and adult – NO EXCEPTIONS.
- Parking and Unloading: Due to volume of traffic we create, unloading and parking can be a slow process. Please follow the directions of the traffic control people and be patient! All vehicles must stay on marked roads. Parking may not be close to your campsites, so anticipate the probability of having to “pack-in” your gear.

Check-out

When your unit is prepared to leave, you MUST find a camp Commissioner and ask for a camp check. Leave No Trace policy will be enforced whether you leave on Saturday or Sunday.

LOCATION

Camp Tahosa, 173 County Road 96, Ward Colorado 80481

DIRECTIONS

CO-470 W

Take the I-70 E exit toward DENVER/GRAND JUNCTION

Merge onto I-70 W toward GRAND JUNCTION

Take EXIT 243 toward HIDDEN VALLEY/CENTRAL CITY

Turn RIGHT onto CENTRAL CITY PKWY.

CENTRAL CITY PKWY becomes NEVADA ST.

Turn SLIGHT LEFT onto SPRING ST. - Turn RIGHT onto GREGORY ST.

GREGORY ST becomes BLACK HAWK ST.

Turn LEFT onto CO-119/CLEAR CREEK ST. (at the light) Continue to follow CO-119.

Enter roundabout (in Nederland) and take 4th exit onto CO-72/PEAK TO PEAK HWY. (through Ward)

Turn LEFT onto CR-96/BEAVER RESERVOIR RD (Portions unpaved). See sign on left.

REGISTRATION

1. Use District website/Double Knot.
2. Register by 12:00 a.m. on January 22, 2010. Otherwise, your costs go up.

If registration is completed by January 22, 2010:

- Boy Scouts and adult leaders: \$15.00

If registration is completed after January 22, 2010, shame on you, the cost goes to \$20 per person. Absolutely no exceptions allowed registration deadline is February 3, 2010. No registrations after February 3, 2010 will be permitted.

WEBELOS PARTICIPATION

- Webelos and Webelos Leader/Parent Registration is \$5 for Saturday

Definitely and highly advisable in the competitive events (more points!). Webelos dens and patrols are invited to participate at the Klondoree on Saturday only. All Webelos must be part of a Troop patrol and should coordinate lunch and dinner arrangements with the sponsoring Troop. **Webelos will not be allowed to camp out, or spend the night, at the Klondoree.** Cub Scout guidelines in the Guide to Safe Scouting rules and especially guidelines on the number of leaders must be followed. Please consider the age and training of Webelos – do not expect them to excel in skills they have not yet learned. This participation should be for fun and to see what Boy Scouting is all about.

PROVISIONS

- Top considerations: Exposure and water – Dress, camp, and act appropriate for the climate – high altitude, cold air, wind, bright and reflecting sunshine, and snow. Read and follow the winter camping information and equipment list included in this packet. Preparation (Scout Motto) is essential for a safe and fun camping experience.
- Competitive event supplies - There are a few events that require Patrols to carry supplies. See the list below.

WATER

Assume that no water is available. Tahosa may have water on the site, but please plan on bringing your own. Scouts should all have a water bottle with them on Saturday. Leaders need to stay hydrated also.

FOOD PREPARATION

Each unit will be responsible for its meals. Webelos and their parents eat lunch and supper with their sponsoring Troop. Remember, you are also responsible for ALL of your food trash (for example, leftovers and wrappers). Practice LEAVE NO TRACE!

Fires are allowed in fire barrels only. Tahosa has a limited number. If possible bring your own. You should bring wood and kindling as well. It is the responsibility of the Troop to monitor and maintain fires and put them out. Leave No Trace policy applies; all ashes are to be taken home. **NO OPEN FLAMES IN TENTS. NO COOKING IN TENTS.**

FACILITIES

The lower meadow has three enclosed pit toilets. Other toilets are available in the mess hall and nearby. It is preferable that these are not used for urination. Be kind to these potties. Your fellow Scout will be next, and you will probably be back again.

CAMP SITES

We will be in the lower meadow. Tent camping only. No motor homes, RV's or trailers are allowed in the Klondoree site. No tying of tarps and tents to the trees. Please observe, but do not feed or harass any wildlife. Keep your trash picked up at all times.

FLAGS

Your unit is expected to fly your Unit Flag for identification. Bring your Troop Flag to the Flag Ceremonies on Saturday morning and evening.

UNIFORMS

Class A uniforms are optional. We'll all have coats and hats on.

MEDICAL EMERGENCIES

Your unit should be able to provide first aid to your participants. In the event of serious injury requiring professional aid or evacuation, contact the on-site Emergency Medical Team. Their location will be identified during the SPL and SM meetings on Friday evening. Your unit should have a first aid kit suitable for the activities and numbers of participants in your unit.

ARE THERE OTHER RULES TO FOLLOW?

- Read Guide to Safe Scouting and practice two deep leadership. All overnight campers must be registered with the BSA (including adults, who must be Youth Protection Trained).
- You are REQUIRED to Leave No Trace. TAKE YOUR GARBAGE HOME WITH YOU.
- Have an immense amount of fun in a safe and courteous manner.

WHAT SHOULD I DO IF I STILL HAVE MORE QUESTIONS?

- Re-read this packet,
- Ask an experienced Klondoree Scout or Adult Leader, or as a last resort,
- Contact Dave Anderson (303-756-4486, David.Anderson@eeiengineers.com) or Dan Bertram (303-850-7748, jcb1drb@yahoo.com). They know all or will find someone who does.

KLONDOREE SCHEDULE

Friday, February 12, 2010

3:30 pm – 8:00 pm	Check-In and set up Camp
9:00 pm	SM and SPL Cracker Barrel
10:00 pm	Lights out

Saturday, February 13, 2010

7:00 am	Breakfast
8:00 am	Flags
9:00 am	Games begin
Noon Lunch	
5:00 pm	Games end
5:30 pm	Sled Race
7:00 pm	Dinner (Best dutch oven dish judging)
8:00 pm	Campfire, Award Presentation and Skits
10:00 pm	Lights out

Sunday, February 14, 2010

7:00 am	Breakfast
8:00 am	Flags
9:00 am	Break camp and camp inspections (no inspection, no patches)
Noon Close	camp

What ever you do, have fun, be safe, and thanks for participating in the Arapahoe District 2010 Klondoree.

COMPETITIVE EVENTS

Safety is our top concern. Any scout(s) putting himself or anyone else at risk will be DISQUALIFIED on the spot. If an unsafe condition exists, the event will be closed until the event Judges feel it is safe to reopen the event.

Webelos cannot exceed 50% of any team.

Events and event details are subject to change (as is the weather).

Winter First Aid

Scouts will be asked to diagnose and describe treatment for various cold weather ailments. Scoring will be based on proficiency of the subject.

Ice Rescue

Scouts will need to demonstrate two rescues of their choice. Rescues will be timed with deductions for lack of safety.

Fire Starting

Very important survival tool, Scouts will start a fire with flint and steel or friction or magnifying glass. Timed event. See equipment list below.

Broom Ball

Scoring will be based on margin of victory. Deductions for lack of sportsmanship.

Knot Tying

Five knots tied by separate scouts, timed event.

Tote & Chip

Scouts will be tested on their tote and chip skills and safety. Points for correct answers/skills.

Leave no Trace

Scouts will be tested on principals of leave no trace. Points for correct answers/skills.

Sled Race

Heats will be run during the day. Top times will compete for the title at 5:30 P.M.

Dutch Oven Cook Off

Best dutch oven meal. Our judges will come to your camp if you sign-up for this event.

Winter Camping Tips

Some tips to keep in mind when your troop takes on winter camping. This section is meant as an overview; only, it has been copied from previous Klondoree information packets and from various web sources. It is not complete by any means. For your own comfort and safety, please study other resources for expert advice on cold-weather survival. If your Scouts are cold and miserable, the whole weekend will be miserable. The more comfortable your Scouts are, the easier your life will be.

- Fail to Plan = Plan to Fail
- Always bring a bit more than what you think you'll need – water, food, clothes.
- 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.
- Keep out of the wind if you can. 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.
- Bring extra 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!
- Bring extra food that doesn't need to be heated or cooked. Granola bars, trail mix, etc.
- Keep a pot of hot water available for cocoa or Cup-a-Soup – these warm from the inside.
- Always eat hot meals (breakfast, lunch, & dinner.) Dutch ovens are the best – they keep the food hot longer. It doesn't need to be fancy DO cooking. Meals should be 1-pot meals to keep cleanup to a minimum. Don't get too fancy with the meals - it's hard to chop onions & carrots at -10°F with gloves on. Prep all meals at home in the warmth of the kitchen.
- Shelter the cooking area from wind (walls of tarps, etc.)
- Fill coffee/cook pots with water before bed. It's hard to pour frozen water, but easy to thaw it if it's already in the pot.
- Remember **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 not too hot.
 - **L** Layers - Dress in synthetic layers for easy temperature control.
 - **D** Dry - wet clothes (and sleeping bags) also lose their insulation.
- **COTTON KILLS!** Do not bring cotton. Staying dry is the key to staying warm. Air is an excellent insulator and by wearing several layers of clothes you will keep warm.
- Remember the 3 W's of layering - Wicking inside layer, Warmth middle layer(s) and Wind/Water outer layer. Wicking should be a polypropylene material as long underwear and also sock liner. Warmth layer(s) should be fleece or wool. The Wind/Water layer should be Gore-Tex or at least 60/40 nylon.
- If you're camping in the snow, wear snow pants over your regular clothing
- Bring extra hand covering - mittens are warmer than gloves.
- Bring 2 changes of socks per day.

- Everyone must be dry by sundown. No wet (sweaty) bodies or wet inner clothing.
- Use plastic grocery bags or bread bags over socks. This keeps your boots dry and you can easily change those wet socks.
- 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!
- Dress right while sleeping. Change into clean, dry clothes before bed. Your body makes moisture and your clothes hold it in - by changing into dry clothes you will stay warmer and it will help keep the inside of your sleeping bag dry. Wearing wool socks and long underwear (tops and bottoms) in the sleeping bag is OK.
- 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.
- Wear a stocking cap to bed, even if you have a mummy bag.
- 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.
- Put a couple of long-lasting hand warmers into your boots after you take them off. Your boots will dry out during the night.
- 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. Or use toe/hand warmers. Toss them into your sleeping bag before you get in. Some of the toe/hand warmers will last 8 hours.
- Eat a high-energy snack before bed, then brush your teeth. The extra fuel will help your body stay warm. Take a Snickers bar to bed and eat it if you wake up chilly in the night.
- Use a sleeping bag that is appropriate for the conditions. Two +20°F sleeping bags, one inside the other will work to lower the rating of both bags.
- 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.
- Use 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.
- 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.
- 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 makes an extra layer of insulation.
- Don't sleep directly on the ground. Get a closed cell foam pad to provide insulation between your sleeping bag and the ground. A foam pad cushions and insulates. The air pockets are excellent in providing good insulation properties. Use more than one insulating layer below you – it's easy to slide off the first one.
- In an emergency, cardboard makes a great insulator. Old newspapers are also good insulation. A layer of foam insulation works too.

- Bring a piece of cardboard to stand on when changing clothes. This will keep any snow on your clothes off your sleeping bag, and 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.
- No cots or air mattresses! Better to lay on with 30° earth instead of -10° air.
- Sleep in quinzees or igloos. These are warmer than tents since you've got an insulating layer of snow between you and the outside air, instead of just a thin nylon layer.
- If in tents, leave the tent flaps/zippers vented a bit, it cuts down on interior frost.
- Drain your bladder before you go to bed. Having to go in the middle of the night when it is 5 degrees out chills your entire body. Drink all day, but stop one hour before bed.

LEAVE NO TRACE

Winter generally provides a blanket of snow which protects underlying soil and vegetation, the major concerns for minimizing impact. However, when thin snow cover is compressed and compacted in early or late season, snowmelt can be delayed, shortening the growing season. Also, early and late winter trips can run into melting conditions, where top layers of soil melted by the sun lie overtop frozen ground. Erosion, and destruction of plant life is extremely likely at these times, and winter travel is best avoided. Otherwise travel in small groups and visit either remote places where your disturbances won't be compounded by others following you (allowing for recovery) or high impact areas that have already been disturbed. Special considerations exist for high altitude and glacier conditions (see Resources).

Backcountry travel and camping

- Winter clothing and equipment, even when "natural" colored will show up well against the snow. Brighter colors can be a safety measure, as people and equipment can easily be lost in a winter storm. Since there are less people out in the winter, the visual impact is less.
- Winter is an exceptionally quiet season in the backcountry. Travel quietly and avoid excess commotion at your campsite.
- One of the greatest impacts can be on wildlife. Animals in the winter have limited food supplies and are often stressed to their limits to survive. Being disturbed by backcountry travelers can drive them away from food sources, require them to use more energy, and can lead to death. Animals may seem more "approachable" in the winter. This is because they are trying to conserve energy. Do *not* approach wildlife too closely.
- Camping
- Tent, igloo and snow cave sites should be selected away from trails and open bodies of water if possible.
- All campsites and cooking areas should be disguised when you leave so that accidental stains are covered, and so that camping areas will be undetectable after 2 - 3 inches of snow has fallen.
- Large snow structures such as igloos and snow caves can be left intact, as long as the rest of the camping area is well camouflaged. Occasionally these snow structures can be used again by other grateful winter travelers.
- Camp away from animal feeding, watering, and bedding areas.
- **Fires** - Under winter conditions, it can be difficult to build a disguisable fireplace or to gather wood by acceptable means. Since any downed wood is under the snow and possibly wet, wood is both difficult to find and may not be usable for a fire. Gathering wood from live trees can have

significant impacts on an area especially at high use sites. Therefore, one should carefully examine the location, the ecosystem, and the ability to clean up the site after the fire before deciding to build one. Obviously, in a real emergency, a fire might need to be built in spite of the impact it might have on the environment

- **Sanitation** - Lack of sunlight and cold temperatures retard the decomposition of fecal material. Maximizing sunlight will help but will leave a visual impact if others are in the area. The best solution is to dig a cathole in just below the surface of the snow. Keep in mind that after the thaw, the feces will be resting on the ground. So pick a cathole site far from any water, summer trails, or summer camping areas. Locate a site with as much ground cover (grass or forest downfall), and as little slope as possible to minimize washing into surface water, and *maximize feces-soil contact*.
- For maximum fecal dispersion, persons should make personal holes as needed. There is no reason for a group's waste to be deposited in one place. Head away from camp. Snow should be kicked over urine stains to prevent the "yellow snow" effect. Toilet paper can be a problem in the winter. Burning it once it has hit the snow is very difficult. You can burn it in a tin can or pack it out. A better idea may be to use snow or ice (although powder snow is difficult to use).
- You almost never need to wash pans in the winter. A simple scouring with snow will freeze all particles. They can be packed out with garbage (or left for the next meal). Ending dinner with hot drinks usually takes care of any food particles. Water left over from pasta is full of carbohydrates and makes good drink water. If you do have leftover cooking water, solid food waste should be strained out of the water and packed out. The water should be concentrated in sump holes far from water sources to prevent massive unsightly stains on the snow. The sump holes should be covered when breaking camp. Leftover grease will cool to a solid and can be carried out. Minimize all solid food since animals will often dig up sump holes.
- Litter is especially difficult to check in the winter when dropped items can be lost so easily in the snow. Special attention should be given to plastic bags, white toilet paper (use colored or better unbleached, or use snow or ice), candy wrappers and candle wax. Candy wrappers should be removed from all candy before leaving town to prevent accidental litter. Candle wax should be caught in a cup and packed out.

NUTRITION

The body "fires" burn somewhat hotter in cold weather and food affects morale, so you will want to supply your group well. Caloric intake in cold weather should increase for two reasons. First, the extra activity required by dressing and the hampering effect and weight of that clothing increases energy needs. Second, the stimulus of the cold gives you a ravenous appetite. Figure on each person consuming from 3,000 to 4,000 calories per day. These calories should come from a diet that is 40% carbohydrates, 40% fats, and 20% protein. This should be consumed along with about 3 quarts of water per day. One of the biggest problems encountered on winter campouts is dehydration so drinking water should be encouraged all day long. The amount of water should be increased with extra activity.

COLD WEATHER FOOD PREP TIPS:

Prepare meals ahead, seal-a-meal them, and just throw them in boiling water to "heat & eat". Encourage the use of plastic bowls. Plastic utensils conduct less heat than metal and they're easier to clean. Warm applesauce (with cinnamon red-hots in it) makes a good warm-up food in the morning. It tastes good and you get your fruit for nutrition.

FIRST AID

Please consult your First Aid Merit Badge book and other resources to familiarize yourself with the following conditions:

DEHYDRATION: Most winter outdoor emergencies begin and end with this one problem -- dehydration is the excessive loss of body water. Exposure to cold has a diuretic effect that results in an increased output of urine. Water is also lost through the lungs, skin and gastrointestinal tract. Under normal circumstances water intake is regulated by the "thirst mechanism". In the cold, however, the thirst mechanism is not a dependable indicator of your needs. When you begin to become dehydrated, your reasoning ability is impaired. You may not realize you're thirsty. It is often easier to recognize a change in urine color than to judge liquid intake. If your urine is not clear by noon, you should be drinking more water.

Prevention: Drink at least 2 quarts of water per day; Increase intake at first sign of change in the color of urine; Avoid dehydrating foods and fluids such as coffee and drinks that contain caffeine, and foods high in protein.

Symptoms: Increased pulse rate; Nausea and loss of appetite; Dark urine color or constipation; Fatigue, sleepiness or irritability; Thirst; Headache, dizziness; Bluish or grayish skin color.

Treatment: In mild cases, the victim should drink liquids, keep warm, and get plenty of rest. More severe cases require professional medical care.

Remember -- dehydration can lead to more serious disabling problems such as hypothermia and frostbite. It is important to remain on the alert to this possibility and reinforce the use of the buddy system!

HYPOTHERMIA: Hypothermia is a lowering of the temperature of the inner core of the body that can and usually does happen above freezing. The victim may not recognize the symptoms and may not be able to think clearly enough to react to his condition. Injury or death may be a result. Predisposing conditions may include poor physical condition, thin build, and exhaustion.

Prevention: Get plenty of rest, eat well, drink lots of liquids; Use wool clothes and windproof clothing; Make camp early; Exercise to keep up body's heat function; Use buddy system to watch for symptoms.

Symptoms: Slowing of pace, drowsiness, fatigue; Stumbling; Thickness of speech; Amnesia; Irrationality, poor judgment; Hallucinations; Blueness of skin; Dilation of pupils; Decreased heart and respiration rate; Stupor.

Treatment: Shelter the victim from wind and weather. Insulate the victim from the ground. Change wet clothing. Put on windproof, waterproof gear. Increase exercise if possible. Put victim in a pre-warmed sleeping bag or blankets. Give hot drinks followed by candy or high-sugar foods. Apply heat with hot stones or warm canteens. Huddle for body heat from others. Place someone in bag with victim. *Self test for hypothermia: Touch the little finger and thumb together. If this cannot be done, stop immediately and warm up!*

SNOW BLINDNESS Snow blindness is an inflammation of the eye caused by exposure to reflected ultra violet rays when the sun shines brightly on the snow. Symptoms are a sensation of grit in the eyes, watering, redness, head ache and light sensitivity. First aid measures include blindfolding and rest. Avoid further exposure to light without sunglasses. The condition heals in a few days without permanent damage. Snow blindness, in most cases, is due to negligence or failure to wear sunglasses. Don't wait for discomfort before putting on protection, damage may already have been done. Putting on sunglasses is essential to prevent further injury.

FROSTBITE: Tissue injury involving the actual freezing of skin and underlying tissue. Recovery from frostbite can be painfully slow. Once exposed, the victim will be predisposed toward frostbite in the future. Frostbite occurs when the body needs heat elsewhere; it redirects blood flow from the extremities to protect internal organs. The blood in the extremities slows and thickens becoming sludge-like. Ice crystals form in skin cells, the skin can't get oxygen, nutrients or liquids it needs, further damaging the tissue.

Prevention: Proper insulation -- cover exposed skin; Guard against wind chill and moisture; Maintain good nutrition, drink water, exercise; Use buddy system to check exposed skin for frostnip and frostbite; Don't wear restrictive clothing, dress in layers.

Symptoms of Frostnip: Redness of skin, pain, burning, stinging or prickly sensation. After the pain disappears the skin may turn white, gray or waxy looking. The skin is firm to the touch but resilient underneath. On thawing, there is aching, pain or brownness.

Symptoms of Second Degree Frostbite: All signs of frostnip may occur; No pain, the part may feel dead or like a stump; Numbness, the part may be immobile or hard to move; Tissue is hard to the touch.

Symptoms of Severe Frostbite: The full thickness and perhaps bone is involved. Swelling and sweating occur after thawing. Gangrene may develop and amputation may be necessary.

Treatment: Don't rub the affected area! Hold it near fire or use cold water to thaw it. Exercise the affected area to promote circulation. Place victim's hands in arm pits or crotch, place foot inside your shirt against your chest, etc. Make certain thawed part does not refreeze. DO NOT attempt to thaw frostbitten limbs in the field: It is less harmful for the victim to walk out on a frostbitten limb. Check for hypothermia. Once in camp, transport the victim to a hospital or physician immediately.

Remember: when the pain goes away, you are in danger of moving into severe injury from frostbite. Take corrective action immediately!

CLOTHING

Winter camping calls for clothing that protects you from the cold and wind and holds in body heat but that can also be ventilated. Several thin layers are better than one big heavy layer. This allows for flexibility with the varying conditions. The prime consideration is function and not appearance!

SOCKS: Wear a wicking (polypropylene for example) sock next to your foot. The insulating sock can be made of wool (best) or wool blend. NEVER COTTON!!! Cotton just keeps soaking up water until your feet are chilled and you are miserable.

LONG UNDERWEAR: Use long underwear made from a wicking-type material such as polypropylene. Again, NO COTTON!!!

PANTS: Good, loose-fitting wool pants (inexpensive ones can be found at Army Surplus store) are the best for insulation. Get some suspenders to hold them up. Ski bibs will also work for keeping you warm. Blue jeans are absolutely useless on winter campouts. (That's right... they're made out of COTTON!!)

UPPER BODY PROTECTION: Use layers consisting of a turtleneck, shirt, sweater, vest, and jacket. Make sure you wear items that fit comfortably. In this layer, it is all right if you incorporate an item or two that contain some cotton (like a flannel shirt), but beware -- it won't dry out quickly and may induce chilling.

HAND PROTECTION: Mittens are warmer than gloves! Gloves are more useful when you have work to do, so bring both. Don't forget extras, your mittens and gloves will get wet.

NECK PROTECTION: Be sure that you have either a scarf or neck gaiter to protect your throat and neck area.

HEADGEAR: Caps, ear warmers, hats, etc. are important because they minimize the heat loss from your head. You can lose about 75% of your body heat through an unprotected head. Be sure to have an extra, dry hat to sleep in.

FOOTWEAR: This is the most important item of your gear. Strongly consider Pak boots. They have waterproof bottoms, leather uppers that breathe (vent that moisture out!), and a removable felt liner. Take those felt liners out and take them to bed with you and in the morning you'll have warm liners to put your feet into. Purchase boots that fit comfortably, never tight, allow for good circulation. Leather hunting boots are inappropriate because they don't have removable liners and when the insulation gets wet (and it will) they will freeze solid. Moon boots are OK. Just remember that they don't ventilate so you'll have to change your socks more frequently.

SLEEPING SYSTEMS

Sleeping comfortably will make or break your experience in the snow. Let's start from the bottom-up:

INSULATION: The insulation under you is almost more important than what is on top of you. First, clear away as much snow as you can from the ground under your tent. Then build several layers of insulation between you and the ground. Remember, in real cold weather, snow itself can be insulation against severe cold.

SLEEPING BAG: So you only have a summer weight bag? Borrow another lightweight bag and insert it in yours, or make a liner for your bag out of polar fleece. Instant winter weight bag! Keep your bedding clean and dry.

BEFORE TURNING IN: Dry your feet well. "Dry" wash them in foot powder. Put on clean, dry, loose fitting socks. Put on clean, dry underwear that you have saved just for bed. Wear a stocking cap and wristlets to keep your head and hands warm. DON'T OVERDRESS FOR BED!! Take off that long underwear. Overheating will make you sweat and then FREEZE because you're wet!

C

Keep yourself and your clothes Clean. Dirt and body oils that build up on clothing destroy its insulating properties.

O

Avoid Overheating. Clothing is designed to be taken off or added to in layers to maintain an even body heat.

L

Wear clothes Loose and in Layers.

D

Keep Dry. Wet clothing removes body heat 200 times faster than it will dissipate through dry clothing. Wet clothes mean trouble.

SUGGESTED EQUIPMENT LIST

(See the Winter Camping Information pages for more suggestions)

Personal Equipment:

- | | |
|--|--|
| <input type="checkbox"/> Sleeping bag (<i>0⁰ rated or 2 bags</i>) | <input type="checkbox"/> Sunglasses |
| <input type="checkbox"/> Ground cloth | <input type="checkbox"/> Toilet Paper (<i>in zip-lock bag</i>) |
| <input type="checkbox"/> Sleeping pad (<i>insulated</i>) | <input type="checkbox"/> Toilet Kit |
| <input type="checkbox"/> Cup, Bowl and Utensils | <input type="checkbox"/> Compass |
| <input type="checkbox"/> Water bottles | <input type="checkbox"/> Whistle |
| <input type="checkbox"/> Flashlight and batteries | <input type="checkbox"/> Parachute Cord |
| <input type="checkbox"/> Small first aid kit | <input type="checkbox"/> Waterproof Matches |
| <input type="checkbox"/> Scout Handbook | <input type="checkbox"/> Pocket Knife (With Totin' Chip) |
| <input type="checkbox"/> Sunscreen and lip balm | <input type="checkbox"/> Handkerchief |

Clothing:

- | | |
|--|--|
| <input type="checkbox"/> Clean underwear | <input type="checkbox"/> Wool Hat and Scarf |
| <input type="checkbox"/> Long Underwear (<i>no cotton!</i>) | <input type="checkbox"/> Wool Gloves/Mittens (<i>at least 3 pairs</i>) |
| <input type="checkbox"/> Inner Socks (<i>no cotton!</i>) | <input type="checkbox"/> Gaitors |
| <input type="checkbox"/> Wool Socks | <input type="checkbox"/> Waterproof Boots |
| <input type="checkbox"/> Turtleneck Shirt or Wool Shirt | <u>(ABSOLUTELY NO</u> |
| <input type="checkbox"/> Wool Sweater &/or Fleece Jacket | <u>TENNIS SHOES!!!)</u> |
| <input type="checkbox"/> Wool Pants or Ski Bibs | |
| <input type="checkbox"/> Winter Parka (<i>preferably w/hood</i>) | |

Optional Items

- | | |
|--|---|
| <input type="checkbox"/> Camera and film | <input type="checkbox"/> Signal Mirror |
| <input type="checkbox"/> Notebook & pencil | <input type="checkbox"/> Bible or prayer book |
| <input type="checkbox"/> Small Day Pack | |

Event Equipment:

- | | |
|---|--|
| <input type="checkbox"/> Klondoree Sled | <input type="checkbox"/> Fire starter (char cloth, kindling, etc.) |
| <input type="checkbox"/> Rope at least 50 feet. | <input type="checkbox"/> Flint and steel for fire starting |
| <input type="checkbox"/> Several 6' sections of rope for knot tying | <input type="checkbox"/> Brooms for broom ball |
| <input type="checkbox"/> Water for each scout (1 liter bottle) | <input type="checkbox"/> Patrol first aid kit |
| <input type="checkbox"/> Energy bars | <input type="checkbox"/> Compass |
| <input type="checkbox"/> Extra gloves and layers of clothing | |

Resources

<http://www.boyscouttrail.com/library/wintercampingtips.asp>

<http://www.princeton.edu/~oa/winter/wintcamp.shtml#Minimal Impact in Winter>

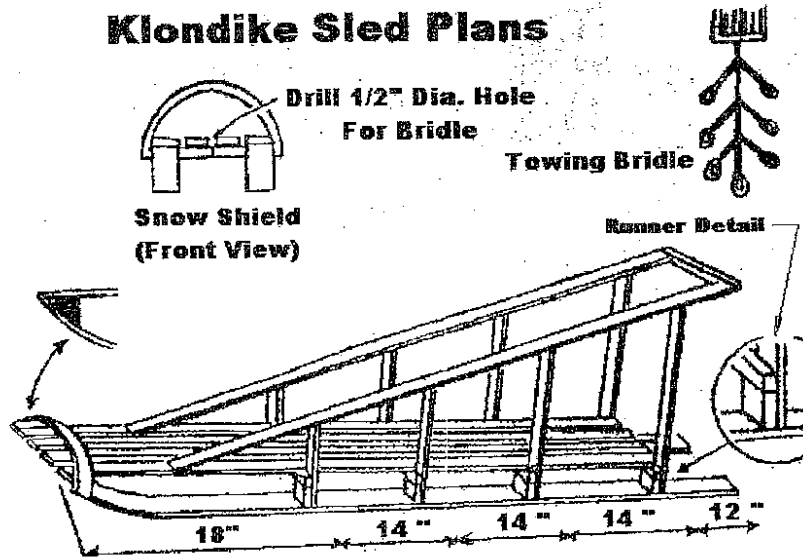
<http://www.inquiry.net/outdoor/winter/camp.htm>

SAMPLE SLED PLANS

Be creative with your sled design.

Approximate Dimensions: HEIGHT = 40 inches, LENGTH = 6 feet, WIDTH = 18 inches.
Paint your sled bright colors -- varnish the bottom of the runners -- then wax before use!
You can add a canvas snow curtain to keep equipment dry. Lace the sides with nylon rope to keep equipment from falling off the sled.
Use screws instead of nails and pre-drill pilot holes to prevent splitting. Use glue in addition to screws.
An old set of downhill skis or pvc pipe works well as runners. Make your sled strong, but light!
Mount a pole on your sled to fly your patrol flag!
Use hardwoods such as maple, oak or ash to make your sled. Pine is too soft!

Be Creative!!



Bill of Materials

- 2 pcs. 4" x 1/2" x 6'6" - for Runners (use skis!!)
- 6 pcs. 1" x 1" x 18" - Cross Supports
- 8 pcs. 1" x 2" x 6" - Upright Supports
- 4 pcs. 1/2" x 4" x 5' - Floor Cover
- 2 pcs. 1" x 2" x 12" - Front Upright
- 2 pcs. 1" x 2" x 26" - 2nd Upright
- 2 pcs. 1" x 2" x 38" - 3rd Upright
- 2 pcs. 1" x 2" x 40" - Rear Upright
- 2 pcs. 1/2" x 2" x 6' - Hand Rail - sand smooth!
- 1 pc. 1/2" x 2" x 30" - Front Curved Snow/Ankle Gua
- 1 pc. 2" x 2" x 18" - Tow Bar
- Rope for Towing Bridle - 1/2" Dia. minimum
- Wood Screws
- Wood Glue
- Paint & Varnish

Additional sled designs can be found at <http://www.inquiry.net/outdoor/winter/gear/sleds/>, or at <http://www.grandtetoncouncil.org/index.cfm?pageid=1776>, or at <http://sne.tripod.com/klondike.htm> scroll down and click on **plans**.
