Snow Pulks (Sleds)

Hiking into your snow camp can be a real job! You usually have up to 20lbs of extra clothing, bedding and fuel. Snow and ice can make keeping your balance tough, even with modern snow shoes. If you do happen to fall, getting back up with an over weight pack, in the snow, can be too much for even experienced hikers.

The High Adventure Team recommends the use of a low cost molded plastic sled combined with a simple waist harness to avoid these problems. Though best suited to established trails, these sleds can make a snow hike much more comfortable - especially when combined with a pair of hiking or cross country ski poles and modern snow shoes. The completed sled is light enough that in more difficult terrain you can unhitch the PVC poles, strap it to your pack like a turtle shell and snow shoe out.

Sleds are commercially available, like this one at a recent OKPIK Class. It has great features like a snap on water proof cover, adjustable poles, a fitted harness, hill brakes, and more- but they can cost $400 or more!

The January 2004 issue of Boy's Life featured an article on rigging your pulk (sled), available here in PDF format - "Backpack Without the Backache" (approx. 240KB file size). This is probably the most common type of sled used by Scouting units. The basic sled is available at many retailers and is easily modified.

This page revised January 30, 2011

Snow Pulks (Sleds)

Here's an interesting homemade folding sled from an article who's author was long ago forgotten (our apologies to the author) - "How to make a Folding Sled" (PDF format, approx. 863KB file size). Our Troop has had the used skis mentioned in this article donated several times and has found additional ski pairs at ski swaps for as little as $5!

The para cord X-braces keep the sled rigid and support your gear bags! We used 1/4" ply scraps & an old broom handle for the wood. Note the lashing line tied to each vertical support with para cord tie lines to secure your gear bags. This example uses a simple over-the-shoulder towing harness but can be equipped with any of the rigid pole examples discussed on this page.

The broom handle sections are set into 3/4" holes in the skis and secured with epoxy & a screw up through the bottom of the ski. The top 2" of each section is cut down to 5/8" diameter that passes through 11/16" holes in the ply pieces. A 1/4" dowel is pressed (not glued) through the handle section to secure the ply, but still allow the joint to rotate. The longer ply runners are 2-1/4" pieces glued together. The 1/4" ply cross pieces have a small 1/2" block secured mid-way between them to support heavier loads.

The para-cord X-braces are secured with a truckers hitch with a quick release knot making folding quick and easy. The folded sled is easy to store or transport. The sled itself tows very easily. The rear control line should be used by your buddy on any slopes as the sled will slide past you! It has at least 4" of ground clearance and flexes making it easy to get past humps and bumps in the snow track.

This page revised January 30, 2011

Snow Pulks (Sleds)

Here's another web site with details on setting up your own pulk for winter outings; http://www.krabach.info/snow_sled/snow_sled.htm (cut & paste into your browser's Address field).

Another good web site for ideas on building your own pulk is http://www.skipulk.com/ (cut & paste into your browser's Address field). They offer a downloadable manual with lots of ideas and progressively more sophisticated designs.

This sled was at a recent OKPIK class - rigged by the student from his class notes!

Here's one local unit's article on using their sleds -

Here's a shot comparing two Scouts outfitted with the same winter camping gear -

Guess which Scout has his gear tied into his sled? Who's going to have the easiest hike?

This photo shows some of our Scouts with their homemade snow sleds in tow.

The sleds themselves are available in several sizes. We prefer sleds that are at least four feet long with high sidewalls (4 inches or more will help keep your gear out of the snow). Also, sleds having molded parallel runners track better in the snow than sleds with smooth bottoms. You'll need to drill some holes in the top lip that typically runs around the sidewalls. Two holes are needed in the front lip on opposite sides of the sled to attach ropes from the waist harness. Space these holes as far apart as possible to improve tracking of the sled. Drill 2 or 3 additional holes in each of the side and rear lips to provide gear lashing points.

The waist harness is often the removable hip belt from the Scout's own backpack. If your hip belt isn't removable, you can use a spare belt from a surplus pack or purchase a low cost universal replacement style belt available at many sporting goods stores.

This page revised January 30, 2011

Snow Pulks (Sleds)

The waist harness is secured to the sled with two lengths of nylon rope (we have tried the more economical polypropylene rope to set up our harnesses, but the cold weather makes a secure knot difficult to tie). Each length of rope is threaded through a length of six foot long 1/2" or 3/4" diameter PVC pipe (the stronger 'Schedule 40' pipe is best). One end of each PVC pipe is secured to the waist harness with a clevis pin inserted through a hole drilled through the pipe. One end of each rope is tied off to each of these clevis pins. The other end of end rope is inserted through one of the holes you've drilled in the front lip of your plastic sled. You can see the completed harness in this shot -

The purpose of the PVC pipe is to keep the sled from sliding into you on a downhill trail. The pipes also improve the sled's tracking in a turn. You'll get the best performance if you keep the ropes tight in each length of pipe. At least one of our Scouters uses a harness with a PVC cross brace at the front of the sled. He reports that this provides improved tracking in a turn. To try this, you'll need 2 PVC 'T' fittings glued to each end of the 6 foot lengths of pipe and a PVC cross piece glued between these 2 'T' fittings. The length of the cross piece should equal the distance between the holes you've drilled in the front lip of your sled.

Packing your completed sled should start by laying a waterproof tent ground cloth in the bottom of the sled. When you're done packing, you'll wrap this cloth over your gear to help keep any snow away from your gear. Next, lay your gear on the ground cloth in the sled with the heaviest gear in the bottom and towards the rear of the sled. This will keep a lower center of gravity to minimize tip overs and will also help the bow of your sled to ride high over the snow, rather than trying to plow through it.

After your gear is packed and wrapped in the ground cloth, be sure to securely lash it to the holes you've drilled in the top lip of the sled. You don't want your dinner rolling down a snowy slope! Your packed sled should look like this -

Note that the gear is all packed above and inside the sidewalls of the sled.

Now that you're all packed, put your waist belt on and head out!

Hiking poles with snow tips or cross country ski poles are a good idea to help keep your balance, but they're not required. Note that each of these Scouts also has eye protection and sun block to eliminate both eye and skin burns from the reflected UV off the snow. Don't forget that UV radiation can even penetrate a clouded sky - always wear eye and skin protection in the snow!

This page revised January 30, 2011