

Chapter 1 : Ojibwa transportation included birchbark canoes, toboggans and snowshoes

Home made UHMWPE toboggan made from 10 foot sheet. Width 16", which is stable, but not too wide, so it fits down inside a snowshoe float (trail) in deep snow. 16" also supplies 3 blanks from a 4'x10' sheet with no waste.

Ojibwa Transportation Canoes When people think of Ojibwa transportation they almost always think of canoes. Made from birch bark the traditional canoes were strong, light and able to carry very heavy loads. A 36 foot freight canoe, for example, could carry pounds and yet be portaged by four men. They looked fragile but in reality were able to withstand collisions that might cripple a wooden boat or a canvas covered cedar strip canoe. A birch bark canoe would often just bounce off a rock or log. Even if it suffered damage it was actually easily repaired. A piece of birch bark could be laced over the rip using split spruce roots and with the application of a few dabs of spruce gum mixed with tallow and some charcoal, the canoe was ready to be launched again. Even if traveler suffered a catastrophic loss, an experienced builder could build a new canoe within a week with materials that were readily at hand. Designs varied from community to community and sometimes from family to family. Some areas were known for their up swept prows, others for elaborate patterns that were cut from birch bark and incorporated in the construction process.

Snowshoes Making bearpaw style snowshoes. Snowshoes are another item that people name when they think of Ojibwa transportation. Different tribes were known to have developed different designs, but basically snowshoes were made egg shaped or long and narrow. Traditional snowshoes had hardwood frames with rawhide lacing. Hunters needing to travel swiftly through heavily forested areas built long narrow snowshoes with upturned toes that were less likely to catch in the underbrush. Bearpaw snowshoes are oval shaped, rounded and upturned on both ends for maneuvering in tight places. They used nobugidaban because nobug means flat and daban means drag. The front end was heated in boiling water then bent upwards. In the old days rawhide covered the bent front end to protect riders, loads were tied to cleats or rawhide straps on the sides, and they were pulled either by dogs or people. A traditional Ojibwa nobugidaban had a strap at the back that was often held by a companion who ran behind the load. He could pull hard if it looked like the toboggan would slide out of control on a big hill.

Chapter 2 : Building a Pulk Sled - Snowshoe Magazine

NOTE: This toboggan design is going to be revamped for The primary change will be in the hood design. The tight second curl will be removed and 12" will be added to the useable length to create a full ' and ' toboggan.

Winter trekker showing great classic ski form, hauling home made 10 foot 9 foot packable space UMMWPE toboggan down the lake on perfect hauling condition wind-packed snow. Toboggan packed for a one-week hot tent trip - front blue square shaped duffle is the wood stove. Load packed long and low. Traditional winter camping is not ultralight camping. Carrying everything on your back for a cold camping trip is next to impossible on a deep snow trip on snowshoes, since you will wallow, and sweat and get soaked. For a hot tent trip it is of course impossible to carry all gear on your back. Add fishing gear with ice chisel or auger to the gear load, several days of food, a fold up grill, ski gear, camera equipment, change of clothes for contingency if you fall through the ice, and it all adds up. You will be wanting some type of sled to haul gear so that you float on the surface of the snow, and have some comforts to be able to use fire. For super ultralight trips such as ski mountaineering trips above treeline, it is possible to be self contained with backpacks only, using snow caves or using tiny light tents, and melting snow for water. But at the end of the day you crawl inside your sleeping bag or snow cave and cook in the vestibule with a fire and fumes risk, and basically lay about in your sleeping bag. Personally I like to be out and about and upright outside or in a hot tent, luxuriating and cooking with fire. The traditional way to live and travel well in the northern bush within the treeline is hauling a sled. Sleds used to be made of wood, but modern plastics have all but replaced them and most of this section will be referring to the newer plastic designs, but we will cover wood since many campers still use it, and there are many unique wood-plastic hybrids being designed. Toboggans In North America, toboggans are the traditional sled, and still are the best choice for a packable load in many snow conditions. In the softer snow of the bush as opposed to windpacked hard snow of the polar regions, big open lakes, and some alpine areas , loads must be kept low so that the sled does not tip over. A repeatedly tipping sled kills your trip. Toboggans excel at design for packing low because there is almost no limit to how long they can be made. The narrower the toboggan, the easier it pulls, but the longer it must be to resist tipping. But if it is too narrow, it will tip all day, ruining your trip. The wider the toboggan, the more stable it is to resist tipping, but the harder it is to pull. If a sled rides up on the float edge it can tip. The boys on a short rest break. From left to right: All sled and harness designs have their pros and cons which we discuss in the following subsection. Traditionally toboggans were made of hardwood planks, which in much of the north was white birch. In the old days I am not sure how they sealed up the wood and finished the surface for low friction sliding. On your trip bring a block of wax to rub on touch ups where the snow is sticking. Packed for a heavier hot tent trip. Note modest upturn on front which utilizes packing space more efficiently. The big recurve front is not needed on these incredibly strong plastics. For wooden toboggans, do not underestimate the base prep time needed before each and every trip. Without a thoroughly glide-waxed base of many layers, it will be agony to haul, and if the base ever gets wet in above freezing conditions, the sled will stop dead with caking snow. Take the time to prep the base thoroughly. Although a well made wooden toboggan is a work of art, plastic toboggans have all but replaced them now, and plastic has many advantages and no disadvantages that I am aware of. Wooden toboggans need constant attention to the base wax layer. Wooden toboggans can crack and snap if hauling a heavy load over a log, or on a down hill if it gets away on you and smashes into a tree crashes happen more often than I would like to admit. If you run out of snow and have to haul it over a melted trail with rock, it will gouge up the base or possibly crack the planks. Plastic toboggan material is very flexible in the cold and incredibly strong. In a reasonable thickness, it can be hauled over logs and rocks without worry of breaking. And it remains slippery in both wet and cold-dry conditions. Webbing loop tie downs riveted and countersunk along sides. Light, non-water absorbing blue woven poly rope knotted for hooking lashing into. Tied bungees will not get lost in the snow. Plastic is stiff enough so no cross piece braces were used. If the toboggan begins to round, then flattening braces can be added. Haul attachment cross piece not visible, just back from the base of the front curve , is a hockey stick bolted and countersunk, so rope pull is from the bottom of the toboggan, so as to raise

front with each pull. Haul attachment is also the anchor piece for the cords that pull back the front curve. Front edge stiffener is a hockey stick, with front grab loop knotted through holes beneath. UHMWPE in this thickness is easier to work with for bending, remains very flexible in deep cold you can roll it up, and it has a lower friction coefficient, i. Every design has pros and cons. To me the underlying goals of toboggan design are efficient hauling with low propensity to tip, and light weight but combined with significant strength since the stresses on sleds are in fact enormous. Obviously there is a trade off with strength and light weight. Therein lies the challenge. Angle aluminum drilled for installing riveted tie down webbing loops, and covered with duct tape to prevent frost burns on bare hands. Stiffeners, while adding weight, allow the rigid toboggan to be turned much easier in deep snow and handled quickly to get up out of slush and leaned up out of the snow at night. The edges keep the bottom load tucked in so it does not catch on brush. A rigid toboggan is also easier to load on vehicle roof racks. Note modest upturn front to maximize packable space, and grab loop front and back for lifting over logs. Note harness pulling from the bottom to keep the curve planing up off the snow. The jury is still out on what pulls better over the long haul and is more resistant to tipping: My preferred toboggan width is 16 inches. That will fit well in a trail breaking sized snowshoe float, and is reasonably stable to resist tipping. Sheets come in 8, 10 and 12 foot lengths, and I have toboggans made of 8 and 10 foot. The advantage to a longer 10 foot toboggan 9 foot packable space over an 8 foot 7 foot packable space, is that the load can be packed lower. You have to resist the temptation to bring too much stuff however. The longer toboggan is also difficult to turn. The 8 foot toboggan 7 foot packable space is lighter, easier to turn, but might have to be packed higher this tippier, depending on your load. I have never used a 12 foot toboggan, but it would be my toboggan of choice for a very long expedition with the extra food and gear requirements on a relatively flat trip. There are several methods to pack stuff on toboggans. Traditionally trekkers used a wrapping tank of canvas or hides. The tank is literally a 4 sided and bottomed fabric tank, open on the top, and you fold down the extra material to seal in your load with ropes or a bungee cord system. Advantages are that everything is contained and can be cinched down. The tank can be used as a floor liner in your shelter or hot tent. This is a modular approach and has some advantages in case of the aforementioned portage on steep slopes, or the portage of gear up into a campsite off the lake or off trail. The disadvantages are that there is loss of some useable space between the bags. Unlike backpacks or canoe packs where gear can be stuffed efficiently and compressed, duffle bags are tough to compress gear into and still be able to use the zippers. Duffle bags when fully stuffed tend to be round, so one secret to using roundish bags is to not pack them full, and they can be cinched down flatter for stacking. One company, Black River Sleds [http: Space limits here do not allow the detailed discussion of the wide range of designs, materials and fastening systems that are continually being developed by innovative winter trekkers and winter gear companies. Follow the links to manufacturers and to our Discussion Forum as we expect toboggan design to be a hot topic there. Pulks Pulks are rigid hulled sleds with sides. One advantage over toboggans is that they are very easy to turn on a dime in deep or shallow snow. Big toboggans are very difficult to turn – sort of like turning a battleship. Their edges catch and resist turning. If you have open trails and lake to travel, then its not an issue, but in thick bush when bushwhacking or punching up off the lake into the campsite, its nice to be able to haul a pulk around tight corners. The long toboggans often need a man on the back to haul its end around a tight turn. Also when hauling on snow over slush on lakes, when resting you have to be able to haul the sled up onto the unpacked snow out of the float since the slush will seep up and freeze on the sled, and pulks are easy to handle quickly, whereas toboggans are tough to get up and over that snow ridge on the float. A custom 8 foot Siglin pulk 7 foot packable space, packed heavy for a week long hot tent trip. Width approx 18 inches total, and about 14 inches on the snow. It has all the advantages of the rigid hull and can be spun on a dime. The sides keep the load well packed inside. The curved sides make the hull rigid, and so a pulk rides differently than a toboggan. The jury is out on what hauls more efficiently: With its snaky motion a toboggan may have the advantage for resisting tipping. We need a physicist to help us out with some experiments to settle the debate. With its curved sides, a pulk also has an advantage for packing gear as the curved sides keep the load in, and the hull slides against the float edge or trail obstructions, rather than a tank or duffel bag which might scrape against the edges of the trail. Commercially available pulks are almost all designed for flat wind packed snow](http://www.blackriversleds.com)

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conditions, and they make them quite wide – too wide to fit down inside a snowshoe float in deep soft snow. You see polar expeditions hauling big wide pulks. The extra width is needed to stop them from tipping over as they go over irregular ice ridges.

Chapter 3 : calendrierdelascience.com - Sleds and Toboggans

Winter Sledge Sled Toboggan Sleigh Snow Racer Winter cm Snowboard Sand Board Brake Thickened Sled Outdoor Sand Grass,BlueCM.

For the last 10 years we have worked on our toboggan and sled run to make it safe, fun and enjoyable for both adults and kids. Tobogganing here runs from mid December to end of March and run conditions depend on the weather. Some days it can be very fast while other days with warmer weather the sled runs slow down. There is a smaller toboggan run for the young ones to enjoy. Some Tobogganing History A toboggan is a basic sled which is a traditional form of transportation utilized by the Innu and Cree of northern Canada. In modern day times, it is used on snow to bring one or more people down a hill or other slope for recreational winter fun. Designs vary from simple, traditional models to modern engineered composites. A toboggan differs from most sleds or sleighs in that it has no runners or skis or only low ones on the underside. The bottom of a toboggan rides straight on the snow. Some parks come with designated toboggan hills where ordinary sleds are not permitted and which may include toboggan runs similar to bobsleigh courses. A thin rope is run through the top of the loop to provide rudimentary steering. The front most rider places their feet in the loop and sits on the flat bed; any others sit behind them and grasp the waist of the person before them. Modern recreational toboggans are typically manufactured from wood, aluminum or plastic. Larger, more rugged models are made for commercial or rescue use. Pulling their small children on toboggans may be considered the first Canadian sleigh rides. They fashioned the toboggan to complete this task. The toboggans were used on hunting trips to bring supplies and to haul their meat back home again. They were also utilised for trading and monitoring trap lines. Snowshoeing in Canada combined with the toboggan grew to become a productive mode of transportation for these people. The sub-arctic Native groups designed toboggans out of 2 or more birch slats affixed to cross-bars for support. The boards were curved up at the front by bending them when they were still green and allowing them to dry. This allowed for simple maneuvering throughout the snow. These early toboggans were pulled mostly by people; however, they were sometimes pulled by dogs. Like their Arctic brethren, it became another form of dog sledding in Canada. Once the base is done the snow blower comes in and builds up the sides to keep the tobogganers on track. This process repeats itself till there is enough snow to open the hill safely. The toboggan run has two paths to the lake. One is the main run and the other acts as a walking path along with a slower run for the young ones to sleigh on. If you look at this picture the walking path is to the left. We ask people to use the walking path and to not walk on the main toboggan run or destroy the banks as this helps keep the run safe and fun. The small round discs are the most fun for single riders and the black sleds are best for couples. Your toboggan ride ends on the lake on a sheet of ice next to the ice rink.

Chapter 4 : Snow Glider Toboggans

Whenever you see images of arctic explorers and adventurers trudging across the snow they are rarely carrying a backpack. Instead, they are pulling their gear behind them on a toboggan or sled. These sleds are called pulks. Not surprisingly, the word pulk originates in winter-loving Scandinavia. The.

These 10 facts about space will blow your mind Sleds and toboggans are both used to transport people and goods on terrain that has a limited amount of friction, such as snow or ice. Both have been widely used in northern climates since before the invention of the wheel. While similar in concept, the sled and the toboggan are different in construction. A sled is composed of a flat surface with runners or rails attached. The surface of the sled is lifted off the snow by the runners, which glide along the top of the snow. Sledding is a popular outdoor sport in many snowy countries. For downhill sledding, no power is needed because the weight of the sled and its rider will pull the sled forward. For flat ground, some sort of energy is needed, and usually provided by livestock. When attached to livestock such as horses, a sled is often referred to as a sleigh or sledge. Ad While sleighs have romantic connotations for most modern humans, they were the primary mode of transportation in ice bound countries until the twentieth century. Some regions of the world still rely heavily on sleighs for transport when roads are inaccessible. A sleigh can be very lightweight, designed to bear two to three humans and a minimal amount of luggage, or it can be designed for heavier use. In some northern countries, sleigh rides are popular winter events, and usually end in a warm lodge with hot beverages and a fire. A relative of the sled is the bobsled , which is a long narrow sled equipped with a steering mechanism. The bobsled is designed for speed, and usually accommodates one or two people for racing. Originally, a bobsled was made by joining two sleds together, although modern bobsleds are built specifically for bobsledding use. Bobsleds are used for sport in many northern countries, and also appear in the Winter Olympics. A toboggan, or flat sled, is an even surface which is turned up in the front. A traditional toboggan is made from wood, although other substances can be used as well. No runners are fitted onto a toboggan-the toboggan is itself a giant runner. Toboggans can be dragged across the ground by people, dogs, or other livestock, and appear to have originated in Canada. The term for a toboggan comes from the Micmac Indians of Canada. Toboggans have limited steering ability from the deck of the toboggan, although people or animals harnessed to it can direct it. Sleds can be steered from inside with the use of cables attached to the runners, which will rotate them as desired.

Chapter 5 : Winter Sledding and Tobogganing - Vacation Things To Do

The 35 in. Invader inflatable snow tube was The 35 in. Invader inflatable snow tube was designed for intense snow tubing action and is built from quality materials that will withstand exciting high-speed runs. The cold resistant heavy duty 18 gauge PVC vinyl is extremely durable. 2 oversized easy to grab handles allow a secure grip and.

Jump to the bottom of the page. Have your toboggan already and looking for tanks or top bags? Our Toboggan Outfitting Guide is coming soon! The long, narrow flexible design of a traditional toboggan allows it to follow your snowshoe track gracefully in the deepest of mid-winter powder, and flow over blow-down on the roughest portage trails. Traditionally made of hardwood planks Tamarack in the north, we now make ours from a couple of different grades of low-maintenance, low-friction Polyethylene, in three different lengths. Find all of our toboggans and kits here. As a result, they tend to grow in length to accommodate a full winter outfit. We produce ours in three standard lengths: They will pivot on a dime and are easily wo- man-handled through tough portage trails. Still fairly easy to handle and maneuver on portage trails, they can pack a significant load for extended trips, solo travel or just bringing along extra creature comforts. The length and packed weight of these toboggans can make them a brute to deal with on the portage trail. These are best dealt with by two or more people on difficult portages. Toboggan Plastics We offer two grades of polyethylene: Read below to see how they compare in terms of friction, abrasion resistance and durability. Watch the 8 minute video at left to see just how little difference in friction the two plastics have. Abrasion Resistance A few scratches are not going to slow that toboggan down! Durability and Flexibility This is the big one, with major differences in performance. UHMW is more flexible in cold weather, and as a result is nearly impossible to snap. HDPE on the other hand, while also very flexible and durable can start to become more brittle at C or lower, and can become susceptible to breakage if stressed too much in the cold. See below for details. If the plastic snaps, give us a call or email so we can make it right. If you bought a DIY kit: We will send you a new toboggan blank. You will strip the crossbars and all outfitting off of your old toboggan to use on your new blank. A couple of hours of work on your end will have your toboggan as good as new! If you bought a finished toboggan: That is, it will be a toboggan with all crossbars installed, hood curled and running line installed. You will strip off the lash system, brake line and tump from your old toboggan to use on your new one. What we ask in return: That the toboggan be cared for and stored properly in the off-season. Toboggans should be stored flat you can leave the hood curl in place, in a cool, dry, dark place. A summer of sunlight can do a lot to age your toboggan plastic as well as all the outfitting.

Chapter 6 : What is the Difference Between a Sled and a Toboggan?

As nouns the difference between toboggan and beanie is that toboggan is a long sled without runners, with the front end curled upwards, which may be pulled across snow by a cord or used to coast down hills while beanie is a cap that fits the head closely, usually knitted from wool.

In the right circumstances a sled offers advantages over backpacking. So if you are setting up a base camp, hauling supplies to a cabin or outfitting a scout troop, you might consider a sled. One can just hook into the harness and pull your winter gear rather than carry it. In theory, a sled just sliding along behind you sounds wonderful. In practice, it works very well on smooth flats and slight down hills, especially if the load is light. Pulling something behind you can get pretty complicated as you thread your way through tight trees, around blow downs, or crossing brooks and steep-sided gullies. On side hills, pulling a sled can be a real pain. Here in the northeast you can encounter all of those challenges within a matter of feet on any given trail. Sleds work best in the right circumstances. This usually means adequate snow cover and a reasonably level, wide trail. The addition of a rigid harness system is what differentiates a sled from a pulk. Carrying a broken plastic sled out of the woods is not fun. A more durable sled is the 5 lb, bright orange Paris Expedition Sled, which I have used as-is. The Paris Expedition Sled is made of. It tends to track straight and is a tough sled for the price. It is also a popular model for modifying into a home-made pulk. These sleds can be found at local hardware stores or ordered online. Otter Outdoors offers 8 different sizes of their sled. Originally marketed for ice fisherman some models even come with ice shack accessories , it supposedly will not crack even at degrees. Pulks A pulk from Finnish pulkka; Scandinavian for a low-slung sled is used to carry supplies or transport a child over snow. SkiPulk offers a wide range of SkiPulk accessories and models. The Granite Gear Expedition sled weighs 17 lbs and has a capacity of 15, cubic inches. With a crossed fiberglass stay system, flexible nylon connecting rods, and a zero play full body harness, this sled pulls and turns easily. The lightweight hull offers a low coefficient of friction drag over the snow. There is a durable cover with 3 compression straps to secure gear and a full-length zipper for access. The hull has molded-in ski runners and there is a brake prevents sled from sliding backward on slopes. The harness poles are constructed in such a way as to allow for hip rotation. Kirafu offers three pulk models: Snowsled makes a variety of pulks for short 2 week expeditions to lengthy multi-week trips, adventure racing models and day trip versions. WildernessEngineering offers an 11, BaseCamp Pulk and a 6 page instruction booklet. Fjellpulken from Lillehammer, Norway offers a broad assortment of models for children, disabled, touring and expedition, rescue and dog racing. Expeditions rely on pulks to transport large amounts of gear. Some that we like are: Mad River Rocket offers a pulk kit, material list and i nstructions. The Pulk Book includes instructions for drilling holes and rigging fiberglass poles to a sled, attaching the poles to a hip belt, tagging on fins for tracking and stabilization, and using it in the wilderness. Pulk poles and hip belts are available for sale through the skipulk website. Toboggans Some winter travelers prefer the traditional toboggan design. Toboggans are the traditional sled in North America. Toboggans carry large loads and can fit in a set of snowshoe tracks. They are usually quite stable due to their length. Toboggans can be made from wooden or plastic materials. Wooden toboggans need to be waxed and may crack or snap if hauling a heavy load over a log. If a wooden toboggan is dragged over a rocky trail you can gouge the base or crack the planks. One tradeoff is the width of the toboggan. The narrower the toboggan the easier it pulls. However, very narrow toboggans are more susceptible to tipping. A wider toboggan is more stable, but harder to pull and it may not fit inside your snowshoe trail. Typically gear is packed in duffel bags, plastic buckets, plastic bins or milk cartons or lashed to the toboggan using a tarp. A method for lashing gear using a tarp involves the following steps: Lay a large tarp on the toboggan. It should be large enough to turn up on all sides such that the ends cover the load completely. The tarp can be used as a shelter or windbreak after you unpack at camp. Distribute the load equally on the toboggan so that it will track properly. Make sure the load is packed squarely, that nothing projects beyond the toboggan edges, and that it is not top heavy. Once gear is stowed on the toboggan cover it snugly with the ends of the tarp and proceed with the lashing. Start the lashing rope at the front of the toboggan, crossing over the top, through the side ropes, back up and

over. Repeat down the side of the toboggan. Bring the lashing rope back to the front of the toboggan in the same manner and secure it with a knot. After your lashing is completed you can secure additional items such as axes, shovels, poles, and snowshoes to the top of the load. However, to maintain balance it is best to keep these extra items to a minimum. Try to ensure that you make a neat, secure job of lashing the load. This will ensure that the load does not slip or move while you are on the trail. When you get to your campsite an over-turned toboggan makes a great platform on which to place your stoves for cooking.

Chapter 7 : Toboggan and snow shoes | Algonquin Anishinabeg Nation Tribal Council

snow-shoe and toboggan. by newell b. woodworth. Author of "Snowshoeing and Tobogganing in Saratoga," etc. and toboggan are modern only in the sense that they.

The waterways and low-lying areas, when frozen and covered with snow, make ideal routes for travel. Snowshoes are the means of travel, and burdens are transported by toboggan much easier than by backpack. The increased capacity allows the traveler to become nomadic, carrying a woodstove and canvas tent and several weeks worth of food. Home is where you set up camp, and while the cold and storms rage outside you can be snug and warm with the right knowledge, experience and a few well-chosen pieces of gear. We hauled all our gear by toboggan, which, after you pack down a float with your snowshoes, glide almost effortlessly over the snow. We were able to carry in much more weight than a heavy backpack, using only a fraction of the energy. Our tent was a 4 oz. We laid a bough floor over the snow, which kept everything inside smelling fresh, and dry, and made for a nice springy bed. The wood stove inside the tent heated the inside up to a balmy 80 degrees or so at ground level despite it being F. The food was absolutely fantastic! We would spend an hour or so each day felling dead spruce and bucking them into firewood, haul a few pots of water from a hole in the ice, and that was the extent of our work for the day. The rest of it was ours to enjoy! We would track and learn animal habits, go for a snowshoe hike, read, cook, and look at the stars and observe the weather. It is better described as winter living. It is a season of narrow margins, and the effects of mistakes and bad judgements are magnified exponentially. Learning traditional winter bushcraft skills is the antidote to such events. Knowledge gained from experience guides you and keeps you safe. The Boreal Snowshoe Expedition is a twelve-day immersion into this lifestyle. Students learn traditional living and travel skills of the northern forest, not in a static classroom setting, but by actively living them on the trail. Snowshoe Expedition We live on snowshoes and in canvas tents outfitted with wood stoves. We haul our gear on toboggans as we travel across the frozen landscape. We are in the field for the entire two-weeks. Deep Knowledge Based On Experience On the BSE there is no room for spectators; each participant is expected to pull their own weight, figuratively and literally. Each day they learn more about living in the bush in the winter. The art of living in wild places with minimal gear, or life without infrastructure. Includes making fires, using axes, knives and saws, cooking over a brush fire, living out under the blue sky, etc. Become comfortable being part of the landscape. A subset of bushcraft is wilderness survival. Learn the skills needed to survive and live in the boreal forest during the winter. You learn about mammals and their tracks then identify them in the field. You study the weather and learn to predict it using observational forecasting. You study the night sky and learn to navigate using it. You learn static knowledge, then put it into action. There is an emphasis on winter tree identification and the ecology and life cycle of ice on the BSE. The soft skills are what make or break a trip. Learn the skills of group dynamics, decision making, risk management and more. Where our hands meet the natural world. Learn to make useful items from forest materials. Expect to be busy with your hands every day on the BSE. Nothing makes you more self-reliant than doing and making it yourself. Learn to be an expert on snowshoes, make a quick snowshoe binding, load toboggans, tie essential knots, read the ice, use an ice chisel, set up canvas tents and trail wood stoves, cook over an open fire, and much more. As with all of our programs, the sum of the entire experience is much greater than combining the individual parts. Pulling toboggans across a remote, frozen lake. Demonstrate understanding of snowshoeing skills and using traditional bindings. Demonstrate understanding of safely setting up canvas tents and wood stoves. Demonstrate effective loading and securing of a toboggan. Demonstrate safe use of an axe to fell, limb, section and split trees for firewood. Understand the ecology of ice and choose safe travel routes based on this understanding. Navigate by map and compass, and also by using barehand methods. Understand the principles of dressing for the cold. Identify and interpret the majority of animal tracks in the snow. Identify all of the trees encountered. Demonstrate their knowledge or knife use by completing several handcrafts. Demonstrate their knowledge of outdoor cooking over a stove and open fire. Understand the soft skills of outdoor leadership and how they apply to the guiding arts. Document daily progress with individual skills in their logbook. How Difficult Is This? If you want to

participate you should be in good physical shape and have some experience outdoors in winter. Click through the links for more information. We work with students and colleges to provide college credit. We are actively seeking other partners at the university level. Past students have used consortium agreements and financial aid to help pay for the course. Students can earn 2 credits from Western State Colorado University that can be transferred to their home school. Other students have completed independent studies through their home institution to receive credit. More information on college credit. Students can use Americorps Education Awards to pay tuition. We offer tuition financing allowing students to take several years to pay for the course more info. Our Winter Guiding Experience We have 19 years of professional experience guiding multi-week snowshoe expeditions and teaching winter survival courses in Maine and points north. We routinely spend weeks per winter on the trail living in canvas tents and on snowshoes in temperatures well below zero. Our instructors are professional guides licensed by the state. Our curriculum is based on decades of field experience, not dogma and untested theories. There are many outfits now offering winter survival courses of a day or two. Some of these even take place in locations where it gets cold and there is snow. A multi-week expedition in the field is a completely different animal than a short course. Our curriculum, instructors and professionalism stand out best when compared with other outfits. We only have 8 spots for On rare occasions we waive this requirement, but we require significant documented experience to do so. Then check out the videos below shot during past Boreal Snowshoe Expeditions, as well as this podcast recorded by two participants of our BSE. Skill â€” Learn by doing. Too much of modern education is theoretical, abstract and sedentary, where the head is engaged but the hands are not. We depart from that norm with a tangible, hands-on approach that emphasizes being an active participant in the natural world and in life. Our point curriculum focuses on necessary skills for the professional outdoors person. Craft â€” Explore the world with your hands. Build useful items from materials gathered on the landscape. Man needs tools to live. Making these necessary items from materials gathered from the landscape bonds you to the land and makes you self-reliant. Nature â€” Learn the language of the world around you. Culture â€” Culture is the human element, or soft skills, which make or break an expedition. Learn management and leadership skills crucial to the professional guide and outdoor leader, as well as how to instruct effectively. Sustainability â€” Life is different with minimal infrastructure. Learn the techniques of living a simple, low-tech life with minimal inputs by living them every day. Compost everything that will rot, grow food, reuse and repurpose resources, care for the land and leave it healthier for future generations. Self â€” Learn your specific needs and boundaries. How much sleep do you need to function? How much of a bed do you need to make in order to sleep well? This is about intimately knowing yourself and what you need to do to keep your body alive and well. The only way to learn it is to live it.

Chapter 8 : Toboggan | Define Toboggan at calendrierdelascience.com

Join us for a snowshoe jaunt around and about at Fort Whyte, followed by an exhilarating slide on the largest toboggan slide in the city! We will end our event at the cafe, stopping for a lovely bowl.

Two quarter-inch bolts 2 inches long
Four quarter-inch washers
Two quarter-inch nuts
Procedure: Drill two half-inch diameter holes at the front of the toboggan. These holes should be the same distance from the side edge of the toboggan and about 14 inches apart or about 2 inches less than the length of the shorter CPVC pipe. Put the two eye bolts into the holes with a nut and washer on the top and a nut and a lock washer on bottom. Slide the short piece of CPVC pipe through the two eye bolts. Now glue the 90o elbows to either end of this piece of pipe using CPVC solvent cement. Make sure that open ends of the elbows are aligned the same way. See the section below on working with CPVC. Now glue the longer lengths of pipe to the elbows. It is critical that these pipes are parallel. You should mark where these holes will go with the belt around your waist. Attach the belt to the poles with the quarter-inch nuts, bolts and washers. Now the next time you are heading out consider turning yourself into a dog sled instead of a pack mule. You will be pleasantly surprised at how little effort it takes to pull your gear. Working with CPVC CPVC is a good choice for the poles of the pulk because it is strong, light, easy to work with and readily available in the plumbing section of your neighborhood hardware store. CPVC generally comes in 10 foot lengths so you will need to buy two lengths for this project. CPVC is easy to cut to length with a hacksaw. Care should be taken to make sure the cut is square. After the cut, clean off any burrs with grit sandpaper. Before gluing any joint, dry fit it first. When joining the short piece of pipe to the elbows it is a good idea to draw alignment marks on both the pipe and the elbows before applying the glue. It is important that both elbows are pointing the same way so that when the poles are installed they are parallel. When you are ready to glue the joint, first spread a primer on the outside of the pipe and the inside of the elbow using the brush supplied with the primer. Then apply the solvent cement to the pipe and inside of the elbow, again with the brush supplied with the cement. Slide the pipe into the elbow. Turn the pipe about a quarter turn to make sure the cement is evenly spread. Make sure the elbows are aligned properly then allow the cement to set according to the instructions on the can. Like what you see? Subscribed to our Free newsletter. Thanks again for visiting! You might also like:

Chapter 9 : Premium UMHW Trail Toboggan Kit - Lure of the North

The wider the toboggan, the harder it is to pull, while the narrower the toboggan, the easier it is to pull. However, narrower toboggans must be longer to resist tipping. Toboggans also have a front curve which allows the toboggan to plow through any deep drifts it may encounter.