

# Make an Adapted Toboggan and Discover Inclusive Recreation in Central New York!

## *Winter Family Fun!*



An adapted sled or toboggan is a great way to get the entire family out to enjoy a new environment. Movement is an essential aspect of every child's life, even in the Winter! Since the goal is to move independently on the snow (not downhill skiing) we will keep things simple. Feeling safe and protected, coupled with a sense of "risk" or "adventure" is essential. Finding the balance between these will require planning and some simple low-cost supplies. Be sure to involve your child. This project will be fun!



# Build a DIY Adapted Toboggan Easily and Inexpensively!



## Materials and Supplies

- Plastic sled (see table)
- Seat (see table)
- Closed cell foam sleeping pad or yoga mat
- Rope
- Strong glue (Tough as Nails®)
- Caulk gun (for the glue)
- Scissors
- Drill & various size drill bits
- Saw for cutting plastic sled, if needed

## Step-By-Step Instructions



## Tim's Tips:

Let the individual try the sled inside or in a garage where it is safe and warm BEFORE going out on the snow. Nothing dampens spirits more than to have to sit or stand around while waiting for someone to adjust or fix a sled.

*Tim Davis PhD*

- Put together a “Possibles Bag” — tools that will help you adjust the sled if needed: include pliers, screwdrivers, straps with Velcro, padding/wedges or something soft, rope, string, and strong tape.
- Plan your trip so that there is a shelter or area providing protection from the wind.
- Pay close attention to the length of time you are planning to be outside. Most individuals will not be moving around a lot so it won't take much for feet and hands to get cold. If an alternative heat source is available USE IT. I like to bring a portable propane heater, like a Mr. Heater Buddy®.
- Last thought — deep snow is NOT a good place to start trying to push yourself around with poles — choose an area where the snow is packed solid and that sliding on the snow is easy. Good luck, take lots of pictures and have fun OUTSIDE!.
- Don't forget the hot chocolate!



The photos on this page were taken last winter at a DIY Toboggan workshop with Arise Adaptive Design at Sunnycrest Park, in Syracuse NY.



# Step-By-Step Instructions

## 1. The Sled



Simple Plastic Sled  
Walmart®, about \$15

Jet Sled Jr., Walmart,  
about \$24



Yoga Mat

**Choosing the right sled** Everyone is different, so look to size and ability first. A taller person will need a longer sled. A smaller child may need something shorter but with a taller back to provide support. The red sled to the left is the sled I use. It has holes drilled about every 8 inches along the sides. To add holes you can easily drill with a ¼ inch bit — just big enough to thread a rope through and lace it all the way around. This way you have can tie in supports, the chair, and strap down a plastic tarp to prevent snow from building up in the sled.

You can also use something like the Jet Sled JR (Walmart, \$24). I like this sled because it has a slightly higher back for good back support and is shorter and very durable.

**Insulating the sled** Be sure to line the inside of the sled with a layer of insulation. The classic blue foam camping pads and yoga mats work great, are inexpensive and easy to cut to fit with scissors. This provides a layer of **very important** padding and warmth as the individual may or may not be able to feel the cold. Sitting directly in a sled without insulation can lead to getting cold quickly. The foam padding also helps relieve pressure on the heels of the foot/boot.

Cut insulation to fit the bottom and the back of the sled. Glue in place with a strong adhesive such as Strong as Nails and a caulk tube. Save the extra pieces for additional padding or to build up the seat.

## 2. The Seat



Crazy Creek  
Canoe Chair  
Amazon,  
about \$55



Hard  
Stadium Seat  
Amazon,  
about  
\$55

**Choosing the right chair — Soft seating vs hard frame seats:**

*Both styles come in a variety of styles. Seat choice is all about the individuals specific needs.*

**Soft seating** is often quick and easy to put into a sled but does not always provide the back support an individual may need to sit upright independently. The straps are great to connect the seat to the sled so it doesn't slide forward or backward. The back adjusts with the side straps. Each side can be adjusted accordingly to prevent the person from arching the back and ending up in a supine position.

**Hard seats** come in a variety of styles as well. Some are solid and others fold up. Before you buy, make sure you can mount it to your sled. The hard frame sometimes makes it easier to mount or tie into the sled and also provides a way to wedge padding in to support the individual.

**Mounting the seat** The seat must be strongly secured in the sled. Make sure it is not able to shift or move. Tie the seat into the sled with a rope. Typically this means you will need to drill a hole (or two) in the two sides of the sled and sometimes two in the very back. Feed the rope through the holes and secure to the straps or frame of the bleacher seat. It is important for it to be secure so it doesn't shift and possibly pinch a finger or hand against the plastic sled.

When I use a Crazy Creek® Canoe Chair (soft bleacher style) I position it in the back of the sled and strap it into the rope lacing around the sled. You can also cut a slit or file down the edge in the sled to fit just right but I just use the rope — the buckles on the Crazy Creek® Canoe Chair are adjustable and can be tightened to fit.

## 3. The Poles



These adjustable poles  
are from Sierra.com  
(about \$30)

Adjustable poles are nice as they will grow with the person or can be used by others in the family

**Choosing the right poles** A variety of poles can be used and adapted to accommodate independent mobility. Make sure the poles you choose are adjustable and have a metal tip — this makes pushing on icy snow much easier and eliminates slipping with the pole which can cause frustration. The pole length should be adjusted for use when seated, so it fits comfortably when pushing on the snow.

If the individual can hold poles and has the upper body strength to push, then they should push themselves across the ice or snow. Being in the appropriate posture — upright and slightly forward is key to success. Snow conditions make all the difference — consider adjusting poles on the ice or in a controlled setting — an ice arena or driveway — so there is easy access to equipment and tools to make adjustments.

**Inexpensive poles** can be made easily from old aluminum downhill ski poles (common in garage sales). Take a blow dryer and heat up the handle, it will slip off. Cut the pole to the desired length (Measure by having individual sit in sled and measure from armpit to ground.) Add 2-3 inches if needed — cut and slide the handle back on the new shorter pole. Handle grips and straps are individualized based upon the persons grip and ability.

## IMPORTANT!!! Try it out and make adjustments

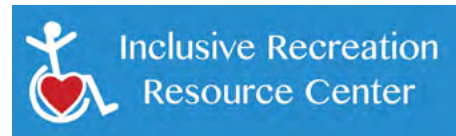
Be sure to try out the sled AT HOME or in the garage or somewhere you have access to tools BEFORE you go out onto the snow. Sit in the sled without a heavy jacket so you can feel any sharp edges or corners - and any possible pressure points! Eliminate these BEFORE you go out on the snow! Making slight adjustments in the seat can make ALL the DIFFERENCE for success and FUN!

# The Inclusive Recreation Resource Center

*We help people of all abilities play wherever they choose!*

## The Inclusive Recreation Resource Center is a Free Online Recreation Database

- This database helps people with disabilities and their families and friends better plan their recreation experiences by knowing what to expect before they leave home!
- Public parks, forests and recreation areas are entered into the on-line database. Families can search this database by activity, venue, and location.
- Certified Inclusivity Assessors have personally reviewed thousands of recreation sites in New York State and even around the World!



Find us at ...

<http://search.inclusiverec.org>

## Local Adapted Winter Sports Resources

### Arise and Ski, Toggenburg Mountain

<https://ariseinc.org/recreation-art/arise-ski/>

### Bristol Mountain OASIS Program for Military Veterans

<http://www.oasisadaptivesports.com/>

### Catamount Ski Area, STRIDE Program, Hillsdale NY

<https://www.stride.org/sports/ski-snowboard/>

### Double-H Ranch Adaptive Winter Sports Programs, Lake Lucerne, NY

<https://www.doublehbranch.org/programs/winter/>

### Gore Mountain

<https://goremountain.com/lessons-programs/private-lesson-information/#adaptive>

### Greek Peak Adaptive Snowsports

<https://www.gpadaptive.org>

### Holiday Valley Resort

<https://skilasp1.wixsite.com/lounsburyadaptive>

### Holimont Snowsports School Phoenix Adaptive Sports Program

<https://holimont.com/snowsports/adaptive/>

### Sunnycrest Park, Syracuse

<http://www.syrgov.net/Parks/sunnycrestPark.html>

### Swain Resort Shared Ski Adventures

[http://www.cprochester.org/shared\\_ski\\_adventures.asp](http://www.cprochester.org/shared_ski_adventures.asp)

### Windham Mountain Adaptive Sports Foundation

<https://www.windhammountain.com/lessons-programs/asf/>



*The Family Fun Series is a collaborative project of Golisano Center for Special Needs, Arise Adaptive Design, and David's Refuge. More info:*

<http://FitnessInclusionNetwork.org>

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