

# Build Your Own Cub Mobile for Entry into the Limerock Cub Mobile Race

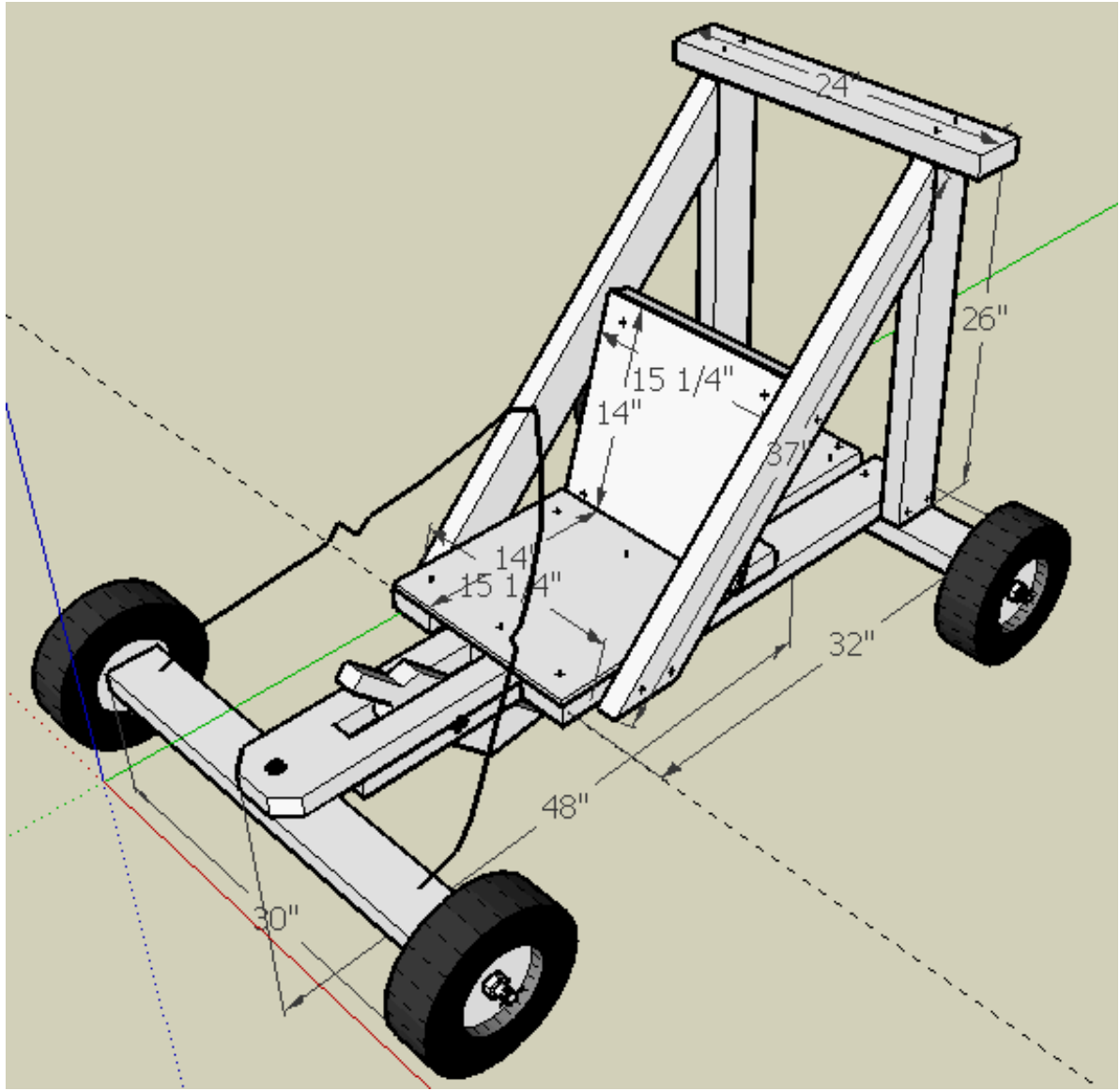


Attention All Cub Scout Packs!!! Come one, come all!!! Build your own Cub Mobile and enter your Cub Scout Pack into the Cub Derby on Saturday!

While registering your pack, please indicate the number of Cub Mobiles that you will be entering.

Please feel free to use your own cub-mobile plans other than the example below. This race is open to all types of Cub-mobiles and there are no rules relation to Height, weight, number of wheels or the length (no motorized Cub Mobiles will be permitted).

However, the Cub mobile must be designed so that it can be pushed and all riders and pushers **MUST WEAR A HELMET. NO EXCEPTIONS.**



## Material List

### Lumber:

<b>Description</b>	<b>Size</b>	<b>Qty</b>
Main Frame	2"x6"x48"	1
Seat frame	2"x4"x32"	2
Seat sides (diagonal)	2"x4"x37"	2
Axels	2"x4"x30"	2
Back (vertical)	2"x4"x26"	2
Push bar	2"x4"x24"	1
Seat backs	2" x 4" x 15 1/4"	2
Brake handle	2" x 4" x 18"	1
Brake brace	2" x 2" x 14"	2
Seat (bottom and back)	1/2" x 14" x 15 1/4"	2

### Hardware:

<b>Description</b>	<b>Qty</b>
Wheels (5/8" axel)	4
12" x 5/8" all-thread	4
5/8" nut	4
5/8" washer	4
3/16" cotter pin	4
1/2" x 4" Carriage bolt	1
1/2" Locking nut	2
1/2" Washer	2
1/2" Fender washer	2
1/2" x 7" Carriage bolt	1
2 1/2" Wood screws	36
1 1/4" Wood screws	34
1/2" Conduit straps	12
4" Spring (brake)	1
6' x 1/4" rope	1

## Comments

This Cubmobile was designed for general Cub Scout use. It can be pushed using the built-in push bar or used in gravity races. It is designed to be strong and can take a moderate amount of abuse without repair.

The wheels were purchased at Harbor Freight. They have 5/8" ball bearing axels. They are great all-purpose wheels that work well on grass and parking lots. There are faster wheels available on the internet for races, but they cost quite a bit more.

The axels are 5/8" x 12" all-thread available at both Lowes and Home Depot. (If you use different wheels, you may have to use different axels)

Use 3 metal conduit straps to hold each axel to the 2 x 4 using the 1 1/4" screws. I sawed a dado down the center of both wooden axels to keep the axels straight. The threaded axels keep the axels in place.

The plywood seat is also held in place using the 1 1/4" screws. All others use the 2 1/2" screws.

All screws were countersunk to keep the heads flush with the wood surface.

Place the 5/8" washer between the wheel and the wooden axel.

Place the two 1/2" fender washers between the 2 x 6 frame and the 2 x 4 axels. Then place the 1/2" washer next to the 1/2" locking nut.

The 37" diagonal seat sides are cut to a 45 degree angle on both ends. A seat belt may be added if needed.

Use a spring to hold the brake lever up. Also, you can place a strip of a rubber on the bottom brake lever to keep it from wearing down too fast.