

Cub Scout Pack 12

Guidelines for Pinewood Derby Car Assembly

The following guidelines are to be followed when building a Pinewood Derby racer. These guidelines are established to minimize controversy over the degree of parental involvement in the construction of the car. Remember that, ideally, the building of a Pinewood Derby car is a parent/son endeavor. If a parent is unable to assist the Scout in building the racer, help from an older brother/sister, uncle, aunt, grandparent, or other adult is encouraged.

Car Design - The Scout should select and produce a sketch of the car design. Ensure that the width of the car is 1-3/4" at the points where the wheels are attached. (*This is the width of the block of wood that comes in the kit*) If the width is less than 1-3/4" at these points the car will not fit on the track.

(Note: Try not to design the nose (front) of the car to a point; this can cause a problem at the starting gate!)

Shaping the Car Body - In most cases, the adult is encouraged to rough cut the car body. This is particularly true if power tools are used.

1. If hand tools are used, let the Scout assist in cutting the shape. Use this opportunity to instruct the Scout on the proper use, care, and storage of the tools that you are using.
2. If power tools are used, ensure that all safety devices associated with the tools are employed. Use this opportunity to instruct the Scout on the safe operation of power tools. Make sure that safety glasses/goggles are worn by anyone around a power tool in operation.

Finishing the Car Body - All sanding, painting, decal application, or other detailing of the car body shall be done by the Scout. Once the shape of the car body is established, it is the Scouts sole responsibility to finish the car. Guidance by the adult is encouraged, but actual performance of the work falls to the Scout. Once again, use this opportunity to instruct the Scout on sanding technique, painting decals, etc., *but don't forget to let the Scout do the work!!!*

(If you have a Tiger Scout, you can help more with the construction of the car.

Let them do as much as they can!)

Wheels and Axles - Adults should take the lead in preparing the wheels and axles. All of the steps that follow are critical if the car is to be a fast racer!

1. As noted in the instructions that come with the racer, remove the wheel seams using a drill (electric or hand), a six penny finishing nail, and a piece of fine sandpaper glued to a flat block. Let the Scout assist by having him hold the sandpaper (all ages) or the drill (recommended for Webelos only).
2. Insert the axles (without the wheels) into the car body to within 1/4" of the head of the axle. Make sure that the axles are inserted perpendicular to the car body. Gently remove the axles with a pair of pliers by slowly twisting and pulling on each axle.
3. Pre-lubricate (a) the inside of each wheel and (b) the part of the axle near the head where the wheel will rotate with dry powdered graphite only.

Do not use regular oil or silicone spray.

4. Slide the wheels over the axles and gently tap the axles into the car body. A gap of 1/32" (How do you measure that?!!) is recommended between the wheel and the car body. In short, a slight gap should exist between the wheels and the body. Each wheel should turn freely. (Put a small amount of glue in the groove over the axle, after it is installed, to hold it into place.)

**There will be a Pinewood Derby Workshop held on
January 13th, 2007 in St. Matthews Cafeteria.**

From 9:00am to 12:00pm.

**We will help the Scouts to cut out their cars
and give them some suggestions on designing and painting.**