

Pack 735

Pinewood Derby Official Rules 2008

1. Each Cub Scout in the Pack will be given an official BSA Cub Scout Pinewood Derby kit. Fathers (or Mothers) and sons are encouraged to build the car together. If you ruin the kit and need to start over, you will be responsible for purchasing another kit.
2. Weights and any other details (fenders, etc.) must be supplied by the builder.
3. All participants are encouraged to read the instructions that come with the kits to ensure that they adhere to the requirements, and make their car as fast as possible.
4. All cars must use only the wheels and axles provided in the kit. Wheels cannot be altered or modified in any way that will change the shape, except for “truing” as stated in the kit instructions.
5. Wheel base (length between axles) may not be changed. (Cars should use slots that are cut in the wood block.)
6. Wheel bearings, washers, and bushings are prohibited. No liquid lubricants.
7. All four wheels must touch the track.
8. The car cannot ride on any type of springs.
9. The car width cannot exceed $2 \frac{3}{4}$ inches.
10. The car length cannot exceed $7 \frac{3}{8}$ inches.
11. **The total car weight cannot exceed 5 ounces using the official pack scale.**
12. Any details added to the car must be within the length, width, and weight limits, and be securely fastened.
13. All cars must be freewheeling, with no starting devices.
14. All cars will be started at the same point on the starting line, no matter what modifications have been made to the cars.
15. After a car is inspected, weighed, and registered, participants will not be allowed to handle or make changes to the car until after all races are completed.

Any car that does not follow the above rules will be disqualified from racing.

Tips on How to Build a Winning Pinewood Derby Car

1. READ THE INSTRUCTIONS IN THE KIT!
2. Getting the wheels and axles on straight is 90% of a winning car. Before you do anything, take the block of wood from the kit, lay it on its side, and very carefully hammer two of the axles (without the wheels) into the pre-cut grooves. As you carefully tap them in with a hammer, constantly check that they are going in straight. If you get the axle in crooked, or if it pops out of the groove, there is practically no way to fix it; you will have to throw the kit away and start over. You can also lay the block on its back and use a large flat-blade screwdriver to tap the axle fully down into the groove. Pound the axle in until about ¼ inch is still out of the block. Then use pliers to carefully twist and pull the axle out of the block. Then, do the two axles on the other side. Now, after you have done all of your sawing, sanding, and painting, you can push the axles (with the wheels) into the block with your thumbs. If you wait until after finishing your car to pound the axles in, you will ruin your paint job, maybe the wheels, and probably get the axles in crooked.
3. If you install the axles as described in number 2, you will not need to glue them in. If you have to glue the axles in to keep them from falling out, then you have done something wrong. It is very difficult to glue the axles to correct for errors.
4. Get weight as close to 5 ounces as possible. You can buy weights or use washers, coins, bolts, etc. If you are going to put the weight inside the car, weigh the individual pieces on the official Pack scale before sealing them into the car!
5. Make sure you have sufficient ground clearance. If weights are on the bottom of the car they must be thin.
6. Do not use oil or WD40, they may soften the wheels and could drip on the track. The Boy Scouts sell powdered Teflon lubricant. At any hardware store you can get graphite lubricant (get the ones without any solvent). You can even use powdered graphite from a pencil lead.
7. Extreme tips: If you really want to go all out, you can polish the axles and make sure the tire surfaces are smooth and perfectly round.
8. Unfortunately we cannot set up the track for test runs before the race. But the best way to test the car is to check that the wheels spin freely. Then, find a very flat level surface, push the car, if it rolls straight then you have a good car.
9. Don't let your Cub Scout or little brothers or sisters play with the car before race day. They can easily knock the axles out of alignment.