

Pack 4031 Pinewood Derby Rules & Specifications

Saturday, February 9, 2019

Schedule: 9:00am – 9:20am Car check-in
 9:20am Creative judging
 Race follows creative judging

The Pinewood Derby competition is for scouts, boy scouts and adults only. Siblings will be able to compete in our other races like the Lego and Raingutter Regatta Derbies. The purpose of a Derby is to have fun! It is a chance for scouts, parents, and siblings to show good sportsmanship and cheer on everyone who has worked hard to build their Derby cars.

The purpose of these rules is to keep an even and fair playing field for all the kids. Any race-day interpretation of the rules will be made with this objective in mind. Please remember that everyone involved in running the Derby is a volunteer parent who is Doing Their Best!

Scout and sibling behavior: In order to protect the cars that you have worked so hard on, there will be no running in the gym, climbing on the stage, etc. Racers who are not currently racing and all spectators must remain in the bleachers or other designated areas. To be respectful to all participants and spectators it is important that children do not run around the gym during other den races. We will have craft/activity tables organized to help keep children occupied that may not be interested in watching other dens race.

To race in the Pinewood derby, cars must be checked in and fully meet “Race Specifications” below. We will have small prizes for race winners and one or more “creative” awards. All cars will be entered into the “creative” competition if they are checked in on time.

Specifications for Both Creative and Race categories:

- Scouts must build the derby cars, with adult assistance as required. The level of adult assistance needed will vary by the scout’s age—Lions/Tigers may need a lot of help, while Webelos should build cars themselves.
- Build your car using the parts that come in the official Cub Scout Pinewood Derby kit. Official kits say “Official BSA” stamped on the wheels. Do not buy a “Pine Car Kit” or any other kit as these will not be allowed to compete. You may design the car as you wish. You may add decorative items.
- Cars must have been built for this year’s derby—you cannot use a car you built in prior year(s).

Race Specifications:

If you build your car using the parts and instructions in the box, you will have NO problems meeting specifications!

- Cars shall be built using only “Official BSA” parts found in the box or available at the Scout Shop. “Pine Car” blocks, wheels, and axels from other kits are not allowed.
- You can add weight to your car. No loose material of any kind, such as lead shot, may be used. The car weight cannot exceed 5.0 ounces. The race scale shall be considered final. If you know the car is at the upper weight limit, be sure to have a way to easily remove weight on race day.
- The overall length of the car must not exceed 7 inches.
- The overall width of the car with wheels, decorations, etc. must not exceed 2 $\frac{3}{4}$ inches. Please be sure your measurement is from the center of the vehicle and not 2 $\frac{3}{4}$ inches with parts that stick out way to one side.
- The car must have 1 $\frac{3}{4}$ ” clearance between the wheels from side to side, and 4 $\frac{1}{4}$ ” front to back. Either the “short” or “long” end of the block can be used for the front of the car.
- No part of the car may protrude past the starting peg on the track.
- The car should have 3/8” clearance underneath the body to be assured of clearing the guide rails on the track. (Note: the flat weight plates you can buy at the scout shop WILL clear the track when attached to the bottom of the car. They do not need to be recessed.)
- You may not cut, drill, bevel, groove, narrow, round, lathe, or otherwise modify the wheels. You may not add wheel bearings, washers, bushings, or any other wheel parts that are not part of the derby kit. No starting or propulsion devices may be added. You may not add springs or a suspension.

- You may not use liquid lubricants or any wet or sticky material. Dry graphite is OK. ALL application of dry graphite must be done before you get to the school. (Note: This can be MESSY!!! And dark graphite will stain everything. Make sure to clean excess graphite off the car before you bring your car to race.)

ABSOLUTELY NO GRAPHITE APPLICATION IN THE SCHOOL BUILDING

Check-In: Cars will be weighed and measured during check-in. Cars must meet specifications to race. Participants will be allowed to modify their cars if they do not meet the specifications during check-in. Non-qualifying cars may still enter the creative judging. It is not possible to add racers once a race has started so please don't be late for check-in.

Car Garage: Once cars are checked-in you will enter your car into the Car Garage. The garage is organized by den. (Dens may be combined if number of participants is too low to have a complete race)

Creative Judging: Ballots will be passed out just prior to creative judging. Voting will begin before the competitive race. A car must be checked into the garage on time to be part of the creative judging.

Race Rules:

- Participants will be called up by den. Prizes will be awarded to the top three winners in each den.
- Cars will race against each other on a four lane track. The winning car will be determined electronically. If the electronic timer does not function the heat will be re-run. You will race in four heats and your race time is determined by the average of your heat times.
- All parts of the car must be behind the starting peg at the start of the race.
- If, during a race, a car leaves the track without interfering with its opponent, it shall be considered to have ended its race heat at that point.
- If, during a race, a car interferes with another car, the heat shall be re-run. If the same car again interferes, that car shall be declared to have lost the race heat.
- If a car is damaged during a heat, the Scout and his parent will be allowed to attempt repairs, but the car must be ready to run for its next heat, within a reasonable time (a few minutes). Repaired cars may be re-inspected.

10 tips for a Great Derby!

1. Have Fun!
2. Scouts are supposed to build cars, with parents helping only as needed.
3. Don't make the front of your car into a sharp point (so that if you look at it from the top it looks like a V). The car will have a very difficult time staying on the starting peg if you do.
4. Check wheels and axles for flaws and rough spots. You can smooth the wheels and polish the axles but be careful you don't damage or bend them in the process. (You will melt the wheels if you polish them too hard!)
5. To run faster, make your car weigh as close to 5.0 ounces as possible. You may add weights to your car such as weight plates, fishing sinkers, washers, etc. to bring its weight up to NO MORE THAN 5.0 ounces. Be sure weights clear the track (3/8" clearance needed). Pennies weigh approximately 0.1 ounces.
6. Try to distribute any weight you add. If you put too much weight far back in the car, it can make the car wobbly.
7. Roll your car on a clean surface to be sure it tracks straight. If it turns left or right, turn the axle on one of the front wheels until the car runs straight.
8. Add some powdered graphite or other DRY lubricant powder to the axles. (Note: This can be MESSY!!! And dark graphite will stain a light-colored car.)
9. Avoid fragile decorations.
10. Have Fun!