Blue Hills District Pinewood Derby Rules

Pinewood Derby will be held Saturday, March 19, 2011 at the Camp Philips Dining Hall
Please remember that this is a YOUTH event.

Adults building cars are encouraged to participate in the Adult Pinewood Derby
on Friday, March 25, 2011 at Turtleback.

All Scouts and families are expected to follow the
Cub Scout Promise and show Scout-like behavior throughout the event.

Only Kits & Wheels/Add Ons purchased through the BSA Service Center, BSA Catalog,
or BSA Retail Outlet will be allowed!

Step 1. Knowing the Rules

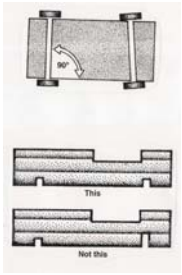
1. All cars must pass inspection to qualify for the race. After they pass inspection they are to be put at the designated table for their den/group and left there. Absolutely no touching of the cars after inspection. The inspection points are as follows.
    A. The car must have been made during the current year (the year that the derby is held) and made by scouts, with a little assistance from the Scout's family.
    B. The width of the cars can be no less than 1 ¾ inches and no more than 2 ¾ inches.
    C. The length of the cars can be no less than 5 inches and no more than 7 inches.
    D. The Wheel base shall be 4 3/8 inches apart, from first groove to second groove, all other alterations will be disqualified.
    E. The weight of the car shall not exceed 5 ounces.
    F. Only official BSA equipment may be used. Official supplies come in the Pinewood Derby Car Kit or are purchased from the BSA Scout Service Center or BSA Catalog.
    G. Wheel bearings, washers and bushing are prohibited.
    H. Any details added must be within length, width and weight limits. The wheels shall not be covered with any substance, decal, etc. so that the wheel will be visible for inspection.
    I. The car shall not ride on any type of spring.
    J. The car must be freewheeling, with no starting devices.
    K. No loose materials of any kind (such as lead shot, coins) are allowed in the car.
    L. The official number must be clearly marked or visible on both sides of the car.
2. Each heat will be announced. Drivers will report to the starting line and give their cars to the starters to put on the tracks. All other people will remain behind the barrier.
3. The starter will make sure the cars are on the track properly and then will start the race.
4. The scouts will report to the finish line to record the results.
5. The car whose nose is over the finish line first is the winner. The judges will decide who crosses the finish line first, second, etc.
6. If the car leaves the track, runs out of its lane, interferes with another car, loses an axle, etc. the heat will be rerun. If the same car gets into trouble the second time the scout is disqualified and automatically loses that race. If, on the second run, another car is interfered with, the heat will be run a third time, but without the disqualified car.
7. When the results of each heat are recorded, the drivers will take their cars and return them to the appropriate table assigned to their den.
8. Awards will be announced shortly after the heat for which the awards are to be given. The drivers and their partners will report to the specified area for pictures and award ceremony.
9. Graphite can be applied ONE time and that is all. There will be no reapplying graphite after each run down the track. Any racer who doesn't follow this rule will be disqualified, and removed from the race. Only lubricants allowed will be dry lubricants such as graphite and Teflon. No spray lubricants such as WD-40 or Silicone may be used.
10. All scouts should stay the entire time to cheer on the other scouts since they have had to wait to run their race while you were racing. This is only showing good sportsmanship. May the best car win!
11. All Adult Racers racing will also follow the same rules.

Step 2. Design the Car's Body

First, choose your favorite design. Outline it onto your paper template. Remember, to maintain the width specified in Step 1B, where the metal axle is to be inserted. Then, outline the block of wood onto paper as shown below. Feel free to design anything you want. Here are just a few examples. Of course, you are not required to build what is listed here, as long as your car meets qualifications. A car with a flat nose wins as often as a car that is thick at the nose. Some experts recommend, however, that the underside be kept flat to prevent wind resistance.

Step 3. Shape the Cars Body

It is up to the Cub Scout and his partner as to how detailed the car is built. Keep in mind the tools you have available: saws, drills, sanders, etc. Bear in mind, too, the safety of the Cub Scout. Generally, the adult makes the major cuts with the power tools, and then lets the Cub Scout file and complete the sanding.

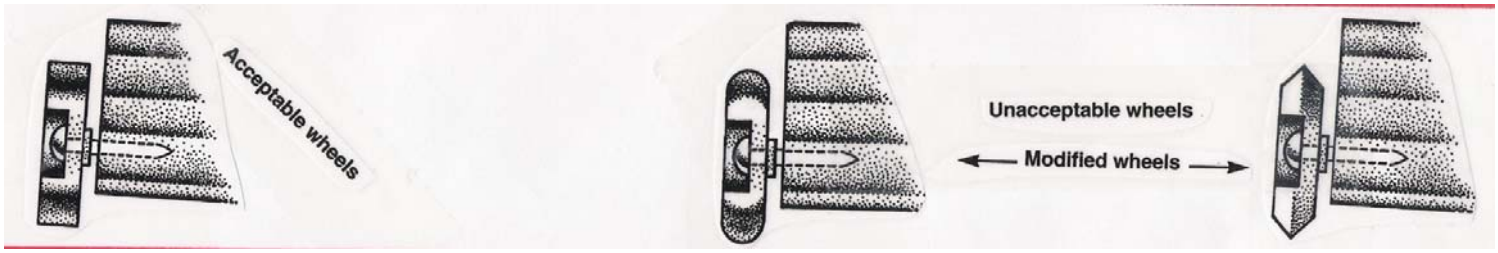


Before cutting out the car, look at the axle grooves that came with your kit. Check the grooves to ensure that each is at a perfect 90-degree angle to the car body. A car with untrue axles tends to steer to one side or the other, causing it to rub up against the side of the lane strop, slowing it down. You can check the groove angles by using a square (the tool achievement in the Wolf Book) a protractor, or even a piece of paper. Both angle grooves must be at 90-degree angles. If your block of wood's grooves are not at 90-degree angles, you must show your car to the local pack leader, who will verify and mark down that this Scout's wheel grooves had to be adjusted.

Once the design is transferred to the clock of wood and the axles are true, you can continue shaping. As stated previously, you may use power tools, files, planes, etc. Do not forget to have a place for weight if you need it. Weight may be placed anywhere as long as it is not taped on and does not exceed the qualifications. You can even bolt it on if you like. Keep details such as drivers, steering wheel, roll bar for last.

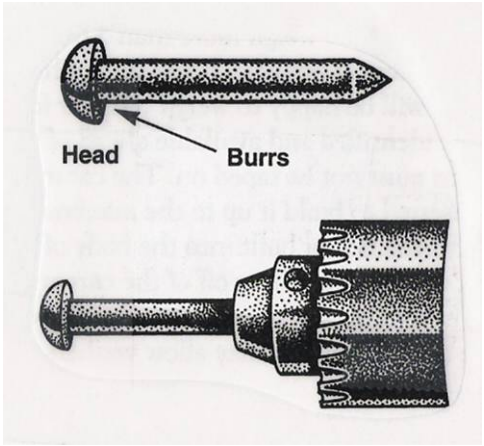
Step 4. Inspect the Wheels

Only the official wheels are accepted. Wheels may not be modified. Cars with modified or old-style wheels will be disqualified. Modifying the wheels could allow the car to interfere with cars on adjacent lanes. Wheels can be sanded to remove surface imperfections, but the treads must be left flat. Inspecting the wheels is important. Make sure all wheels roll freely and smoothly around the axle. Get a drill bit that fits just inside the wheel where the axle fits. This cleans out the roughness and burrs that could cause the wheels not to spin freely on the axles. Wheels and Axles must be inspected to verify official equipment has been used. DO NOT cover with paint, stickers or cover the axles.



Step 5. Preparing the Axles

To insert axles into the body block, use the technique mentioned in Step 3. The axles themselves may need special attention. Check each axle to see if there is a burr on the underside of the head. To let the wheels run as freely as possible, place an axle in electric or hand-drill chuck, then smooth the burrs with a fine emery cloth or file. To fine tune your axles, polish them with a jewelers rouge or fine emery paper. These items can be purchased at a local Hardware store. Sanding is allowed to remove burrs only, original width may not be changed, wheels that are sanded round or edges sanded off may be disqualified. DO NOT install the Wheels Yet.



Step 6. Paint

Sanding sealer is one of many types of primer; most can be found at local automotive parts or hardware stores. After molding and sanding your car to your satisfaction, prime it, sand it with a fine sandpaper and add additional coats of paint. Do not glue decals on it yet.

Step 7. Install Wheels and Axles

Now, put the axles and wheels on the car, but don't glue the axles on yet. Weigh your car, being sure to place the car and the accessories (driver, steering wheel, roll bar, etc.) on the scale.

Step 8. Add Weight

The car may not weigh more than 5 ounces. Get your car as close to 5 ounces as possible. The scale at the District Pinewood Derby will weigh all cars, and scouts can adjust their cars according to this scale. The car may be hollowed out and weight inserted to build it up to the maximum weight. Make sure it is securely recessed or built into your body of the car, and that the car at 3/8" clearance. The officials do not want any objects falling off of the cars and onto the track. If your car is not up to or close to the official weight on the day of the race, you may add more weight, but this weight may not be taped to the car. Weights may be applied under the car, but MAY NOT extend below the profile of the wood block.