



Cub Scout Pack 326

Pinewood Derby Rules

1. All Scouts must be present for their car to compete; no absentee entries.
2. **Model Year:** Cars must have been built NEW for the current Pinewood Derby season; previous years' car will not be permitted.
3. **Material:** Cars shall be constructed from the parts contained in the Official BSA Pinewood Derby Kit, as sold by the Scout Service Center. Any replacement parts must be Official BSA parts as sold by the Scout Service Center. Materials from the kit may be supplemented but not replaced.
4. **Car Size:** Car shall be constructed from the block of wood included in the Official BSA Pinewood Derby Kit.
 1. The total length of the car shall not exceed 7.00 inches, including any decorative features.
 2. The maximum width of the car, including wheels and axles, shall not exceed $2 \frac{3}{4}$ (2.75) inches.
 3. The minimum width of the car between the wheels shall be $1 \frac{3}{4}$ (1.75) inches.
 4. The maximum height of the car shall not exceed 3 inches. This height limit is in place so that the cars will fit under the finish line gates used with the electronic timers.
 5. Underside clearance of at least $\frac{3}{8}$ " (0.375) inches.
 6. The front of the car must have a large enough flat surface to rest against the starting pin. If there is not enough surface, the car will run backward on the track if possible. Pointed nose cars are hard to start. The race starter will do their best.
5. **Wheels:** Only wheels provided in the BSA Pinewood Derby car kit will be permitted.
 1. Car must have four wheels and all wheels should contact the track.
 2. Wheel treatment (hub and tread smoothing and polishing) may not result in substantial removal of mass nor in reducing the tread (track contact) width from the original kit wheels.
 3. All lettering and numbering, both inside and outside of the wheel, must remain complete and be visible with the wheel on the car.
 4. The fluting, spokes and other markings on the outside wheel area must remain visible. ("Fluting" refers to the small bumps on the outside edge of the tread.)
 5. The wheels shall turn about the axle nails from the kit.
 6. Wheel tread surface must be cylindrical. Therefore, the following modifications are prohibited:
 1. Rounding of the tread surface.
 2. Grooving, H-cutting, or V-cutting the tread surface.
 7. The following wheel modifications are prohibited:
 1. Removing material from the inside tread surface or the inside sidewall surface.
 2. Drilling holes in the tread, sidewalls, or spoke area.

3. Removing material from the sidewalls or spokes.
4. Filling wheel tread with any type of material.
5. Filling the wheel bores and re-drilling the bore.
8. The rules permit many wheel modifications, so long as you observe the restrictions listed above. Common legal modifications include but are not limited to:
 1. Truing the tread surface with sandpaper, straight edge, or lathe to correct "out of round" wheels.
 2. Truing and shaping the inner edge of the tread surface; 3) narrowing the tread surface to 7.5mm to get straight edges.
 3. Applying wheel bore treatments such as polish and dry lubricant to smooth the bore.
 4. Tapping the wheel bore.
 5. Truing and re-coning the tip of the inner hub.
 6. Removing the double step from the outer hub.
9. Color wheels are permitted but must be Official BSA Wheels purchased from the Scout Store.
6. **Axles:** Only axles nails provided in the BSA Pinewood Derby car kit will be permitted.
 1. The axle nails shall be firmly affixed to the wood of the car body.
 2. The original wheelbase of 4 3/8 inches shall remain the same and axle must be inserted into the axle slot which are pre-cut in the block of wood.
 3. The axle dimensions may not be changed.
 4. Burs on the axle head (the non-contact surface) and shaft may be corrected, however the axle may not be changed substantially.
 5. Axles must not be milled or slotted.
 6. The pointed tip of the axle must be visible for inspection.
 7. Wheel hubcaps, bearings, inserts, washers and bushings are not allowed.
7. **Weight: Race cars may weigh no more than five (5) ounces (total weight) as determined on the official scales during race day inspection.**
 1. Weight may be added to the car and will be considered part of the car for purposes of all measurements.
 2. "Weight" is considered to be any material on the car that is not provided in the kit. All weight must be securely fastened to the car, e.g., by permanent glue, nails or screws, but not by "sticky substances", e.g., tape, or tack spray.
 3. Weights shall be passive, i.e. non-movable, non-magnetic, non-electric, non-sticky, etc.
8. **Gravity Powered:** The race car may not be constructed or treated in such a way that the track's starting mechanism imparts momentum to the car. (For instance, this provision disqualifies cars with sticky substances on the front of the car and protrusions which may catch on the starting pin or cross the finish line prior to the wood front of the car.)
9. **Springs:** The car shall not ride on any type of springs.
10. **Lubricants:** Only dry lubricants may be used. Liquid lubricant is prohibited.
11. **Starting Gate:** The entire car must stage behind the starting pin. The front of the car MUST NOT be grooved, slotted or modified in any manner that extends any portion of the car past the starting pin.

12. **Detailing:** Details such as steering wheel, driver, decals, painting, and interior detail are permissible as long as these details do not exceed the maximum length, width, height, or weight. All details must be permanently attached.
13. **Body:** The car body may have no moving parts / objects / liquids on or contained within the car, other than the four official wheels mounted on the car.
14. **Inspection:** Each car must pass inspection by the Official Inspectors before it may compete. The Inspectors have the right to disqualify cars which do not meet these specifications. Cars may not be handled after they receive official inspection approval.
15. **Car Number:** Racer's car must have number assigned to them somewhere on the top, bottom, or side of car. This ensure the proper car is racing in the correct lane and heat.
16. **Judge:** The designated official has final say on all rule issues, interpretations and violations.