

## **Cub Scout Pack 80 Pinewood Derby Rules**

### **Updated 2023**

The Pinewood Derby is intended to be an interactive, fun project between adults and their Cub Scout. The race offers an opportunity for you and a Scout to work on a project together and to enjoy the spirit of friendly competition. The Pinewood Derby is also a chance for your Cub Scout to enjoy the satisfaction of building their own car from the kit provided. Please feel free to give guidance and assistance to your Scout on an "as needed basis" as they build their Pinewood Derby car, but let the finished project be "their own".

The Pinewood Derby also presents an opportunity to remind your scout of the Cub Scout Motto, "Do Your Best," and to practice positive sportsmanship. The Pack rewards some Scouts by presenting prizes in several categories to recognize effort and creativity without overemphasizing winning. This philosophy is reflected in these rules.

There is not an official set of Pinewood Derby rules issued by the Boy Scouts of America organization. Every Pack makes its own rules. The rules below are designed to support a fair competition by imposing limits on the extent to which the Pinewood Derby Kit can be modified. Please feel free to contact the Cubmaster if you have questions, comments, or would like clarification regarding the Pack 80 Pinewood Derby rules.

#### **A Note about Graphite Lubricant:**

**Since moving to the Holmes Bus garage, graphite lubricant IS allowed now.**

### **Pinewood Derby Car Specifications**

- The total length of the car shall not exceed 7 inches and no part of the car can extend beyond the starting post.
- The total width of the car shall not exceed 2 3/4 inches, wheels included.
- The total height of the car shall not exceed 3 inches.
- The total weight of the car shall not exceed 5.0 ounces.
- The car must have a minimum of 1 3/4 inches clearance between the wheels (original width of the wood blank).
- The car must have 3/8 inch ground clearance underneath the body so that the car does not rub on the center guide strip of the track in the transition zone from sloped to flat.
- The wheel-base (distance between the front and rear axles) may be changed as long as the wheels do not exceed the maximum length of 7 inches.

### **Car Body, Wheels and Axles**

- The car must have been built new for this year's race, using all new components. Cars which competed in any previous Pinewood Derby race will not be allowed to enter. No component of a car other than decorations (e.g., cockpit cover, driver, steering wheel, etc.) which is entered in this year's race may be "borrowed" from a car which competed in any previous Pinewood Derby race.
- No starting systems or propulsion devices of any type are allowed in or on the cars.
- The car must be freewheeling and powered only by gravity.
- Cars must be built from the pine block supplied in your official Pinewood Derby Kit provided by Pack 80. The block may be shaped in any way desired, as long as the finished car meets all specifications described above.
- The car may be hollowed out and weights added, up to the maximum weight allowed. Any

additions to the car (such as weights or decorations) must be securely attached to the body.

- Details such as steering wheels, driver, decals, painting and interior details are permissible as long as these details do not cause the car to exceed any stated specifications.
- No loose material of any kind, such as lead shot or liquids, may be used in or on the car.
- Four wheels must be used and all four wheels must make contact with the track. Only the
- Official BSA wheels supplied in this year's Pinewood Derby Kit may be used. The wheels may not be cut, drilled, beveled or rounded. Wheels may be lightly sanded to smooth out seams and molding imperfections on the tread area. This light sanding is the only modification allowed to wheels.
- Only the axles supplied in the Pinewood Derby Kit the Pack supplied may be used. The axles may be polished and lubricated if desired.
- Powdered graphite is the only lubrication allowed. The graphite must be applied prior to entrance to the school building and prior to the official weigh-in.
- The car must not ride on any type of spring or other suspension system, other than the axles and wheels supplied in this year's Pinewood Derby Kit.
- Any type of wheel bearing, washer, bushing or hubcap is prohibited.
- Cars with wet paint or glue at check-in will be disqualified.
- The scout's name should not be visible on the car. Each car will be assigned a number at check-in.

### Technical Inspection

- Each car must pass inspection by the official inspection committee before it will be allowed to compete.
- The reading of a car's weight on the official scale at check-in shall be considered final.
- Once a car passes inspection and entered into the race, the car will be impounded and only race committee members may touch it. No modifications are allowed once the car passes final inspection.
- The Inspection Committee has the responsibility to disqualify those cars that do not meet all specifications.

### Ground Rules

- If a car becomes damaged after final inspection (i.e. loses a wheel or is otherwise damaged), the racer shall have 5 minutes to make a repair. If repairs can not be made within the 5 minutes allowed, the racer shall be disqualified from the event.
- Work on a car after it passes final inspection is strictly limited to the repair of any damages necessary to return the car to the condition equal to that at which it passed inspection. No modifications of the car shall be permitted during the repair period.
- If a car leaves its assigned lane or interferes with another car during a race, the race will be run again. If the same car leaves its assigned lane or interferes with another car a second time, that offending car will be disqualified from that race heat.
- Only race officials and scouts participating in the current race may enter the track area. If any car is interfered with during a race by a race official or spectator (intentionally or unintentionally), the race will be run again.
- Unsportsmanlike conduct by any participant or spectator will be grounds for expulsion from the competition and/or the race area.
- Winners will be determined by means of an electronic "finish line".
- Race results shall not be challenged.

## Race Format

- The track has four lanes. A run is one trip down the track. All cars will make four runs and the overall time for the four runs will be recorded.
- A race heat will consist of from two to four cars competing against the clock, not against each other. All cars will rotate between the lanes of the track for each run.
- Cars will be mixed between runs down the track. In other words, the same cars will not always be racing against each other on the track.
- Winners will be determined based on their overall time from the top 3 of their 4 runs.

## Awards will be distributed for the following:

### Speed Awards by Rank

Lion Champion, 2nd place, 3rd place  
Tiger Champion, 2nd place, 3rd place  
Wolf Champion, 2nd place, 3rd place  
Bear Champion, 2nd place, 3rd place  
Webelos I Champion, 2nd place, 3rd place  
Arrow of Light Champion, 2nd place, 3rd place  
Sibling Division, 2nd place, 3rd place  
Pack Champion – *fastest of all rank winners*

**Precision Design Award** This award will go to the car that crosses the finish line under its own power but has the highest overall time. To win this award you must design your car to go slowly but not so slowly that it stops before the end of the finish line. The entire car must cross the finish line on each of its four runs to qualify for this award.

### Design Awards

Scouts Choice  
Best Scout-oriented Design  
Most Creative Design  
Funniest

## Eligibility for District Race

The top three winners from each den/rank will automatically be eligible to participate in the District Race (place and time will be announced at the PWD). The entrance fee for the top *two winners from each den/rank* for the District race will be paid by the Pack. If a winner in one of these categories is not able to attend the District Race the spot will be offered to the next person in order of finishing position until all spots are filled.