



# Cub Scout Pack 88 2020 Youth Class Pinewood Derby Rules



## Section I – Introduction

The Cub Scout Pinewood Derby is among the most cherished of all Scout memories. Since it is a youth event, some may wonder why we need detailed rules. There are two central concerns. First, we want all the Cub Scouts to have an equal chance to build a winning car. Second, Scouting is one of the last areas of youth endeavor where it is really true that “it matters not whether you win or lose, but how you play the game”. If every Cub “Does their best”, plays by the rules, and has fun, we could do away with trophies and still offer a worthwhile activity.

## Section II – General Requirements

Cars must be built during the Scout year of the race. No “oldies, but goodies” from previous years. This includes reusing wheels, axels, etc.

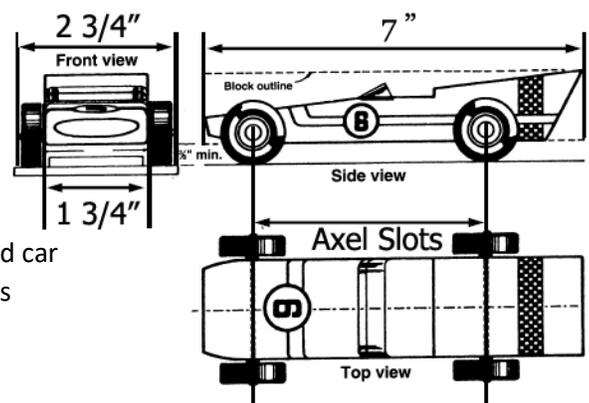
The car raced at the district level should be the same one raced at the pack level. No further construction or modification should be made to the car after the pack race. It is recommended that packs impound winning cars until the district race.

**The Official Pinewood Derby Kit supplied by the Boy Scouts of America must be used.** Cars must be free-wheeling with no starting devices. No car bodies, wheels, or axels from any other source will be allowed. Designs may have added fenders, weights, small people, or other decorations from other sources, as long as the car meets dimension requirements and these additions are firmly attached.

Each car must pass an inspection for compliance prior to the race and may be disqualified any time during or after the race if the officials deem it unacceptable – using unofficial materials or designs.

## Section III – Car Specifications

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|----------------------|--|
| A. Width:            | Shall not exceed 2-3/4 inches            |
| B. Length:           | Shall not exceed 7 inches                |
| C. Height:           | Shall not exceed 4 inches                |
| D. Weight:           | Shall not exceed 5 ounces                |
| E. Wheelbase:        | Shall not exceed 4-3/8 inches            |
| F. Bottom Clearance: | Minimum 3/8 inches between track and car |
| G. Wheel Spacing:    | Minimum 1-3/4 inches between wheels      |



## Section IV – Design and Construction

### A. General Design

Do not use reflective paint, tape, or other materials as these may interfere with track sensors.

Paint and glue must be dry.

### B. Car Body

Accessories such as fenders, steering wheels, driver, etc. permissible as long as they do not exceed car specifications and are firmly in place. No loose materials will be allowed on the car.

Car must have a front nose that sits on the starting pin without extending past the pin. Cars that cannot be placed on the starting pin will be run backwards.

### C. Wheels and Axels

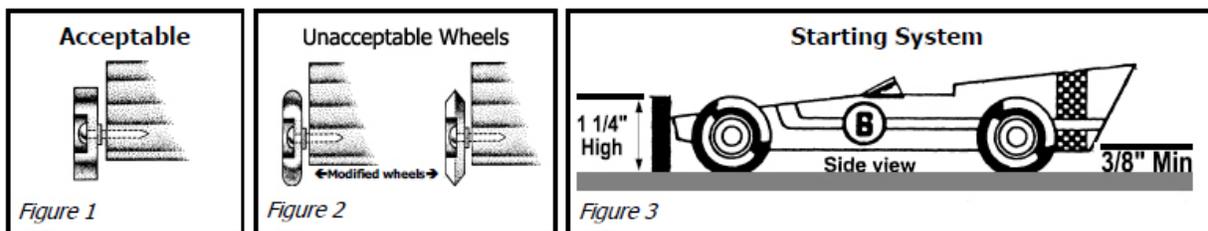
**Only the wheels and axle nails provided in the kit are to be used.** Modifications to the wheels are not permitted (i.e. ground to a fine line, rounded, tapered, grooved, drilled, or any other kind of modification). Wheels may be lightly sanded to remove the burrs and mold marks. Wheels must display the words BSA-Pinewood Derby on the side walls. The council office sells official wheels of various colors. These wheel sets are permitted. Wheels acquired through sources other than the Council Service Center or scoutshop.org will not be permitted.

**Only the grooves provided in the block are to be used to place the axle nails. The space between the grooves must not exceed 4 3/8 inches.** If the grooves are not square, damaged or are greater than the maximum allowed space return the kit to the pack or Council Service Center for a replacement kit.

The use of washers, bearings, bushings, spacers as well as the use of solid axles, any type of springs or suspension is not allowed to be used on the car. Axels must be visible within the axel slot. Cars with filled in slots will not be permitted.

Axles may be polished. This is a process of sanding the axle with fine sandpaper.

Axles may be bent; however, wheels must remain parallel to the track surface. Wheel camber is not permitted.



### D. Weight

The car's weight may not exceed 5 ounces. The weight and electronic scale used by the race committee will govern. Weights may be added to the car and must be securely fastened to the car body. Lead weights must be painted or otherwise covered so that the lead cannot be touched. Mercury weights may not be used.

### E. Lubricant

Only dry lubricants such as powdered graphite or BSA Axle Lube are allowed. No liquid lubricants!

## Section V – Race Day Procedures

### A. Check-In and Inspection

Scouts will be given an opportunity to test run their cars prior to check-in/inspection. At this time, racers may lubricate axels and adjust weight and wheel balance.

All cars must pass inspection prior to racing. Cars that fail inspection will be allowed to made adjustments up until the scheduled race start time. As a matter of fairness to other participants, race officials SHALL disqualify any car that contains any material deviation from these rules. Where any car is disqualified, the owner will be advised of the basis for the disqualification and provided an opportunity (and a period of not less than 10 minutes) to make the car conform to the rules.

Once cars pass inspection, they will be impounded by race officials. No further modification or adjustments may be made. Cars will not be subject to repeated "re-inspections" by the race committee or others.

The determination of race officials is final.

### B. Race Setup

Race heats will be determined by the fairest method possible. All cars will race against all opponents on all track lanes. Race schedule will be determined by computer.

An electronic timer will determine the winner of each heat with one human judge. The human judge will call the winner according to the electronic timer. The owner of any car may appeal the decision of the human judge to the race committee. The decision of the race committee will be final.

Points will be awarded based on finishing order: First - 1 point, second - 2 points, third - 3 points, DNF (Did Not Finish) - 4 points.

Awards will be presented to the racers with three lowest point totals.

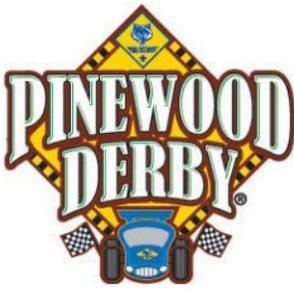
First-place winners will move on to the championship round. Cars will remain impounded until the championship race. Any cars removed from the race area will be disqualified from further races. No modification or lubrication is permitted between rank races and championship race.

### C. Race Issues

In the event that a car interferes with another car or jumps the track before the timer, the heat will be run again. If the same car interferes a second time, that car will be disqualified for that heat.

If a car suffers a mechanical problem (loses a wheel or axle, etc.) that can be repaired in less than 5 minutes, the owner will be given a period of up to 5 minutes to repair the car and the heat will be run again. No lubricant may be added. If the car cannot be repaired within 5 minutes, the broken car will be disqualified.

Any participant and their car may be disqualified by the race committee for unsportsman-like conduct unbecoming a member of the Boy Scouts of America.



# Cub Scout Pack 88 2020 Open Class Pinewood Derby Rules



## Open Class Race:

This is not your typical race. This race is for creative competitors out there to test their skills by bending the standard pinewood derby rules to create the fastest gravity-driven car possible. This class is open to scouts and adults.

## Section I. Entry Fee

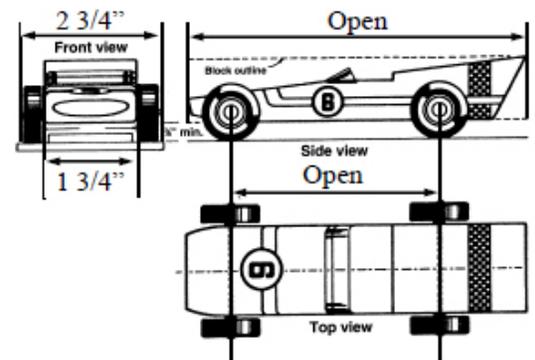
There is a \$5 entry fee for the Open Class.

## Section II. Car Specifications

- A. Width: Shall not exceed 2 3/4 inches
- B. Length: No Restrictions\*
- C. Height: No Restrictions\*\*
- D. Weight: No Restrictions
- E. Wheelbase: No Restrictions
- F. Bottom Clearance: Minimum 3/8 inches between track and car
- G. Wheel Clearance: Minimum 1 3/4 inches between wheels

\*Track extends approximately 8 inches from starting pin

\*\*Must be able to clear finish timer



## Section III. Design and Construction

### A. General Design

The Official Pinewood Derby Kit supplied by the Boy Scouts of America must be used in some fashion. One kit will be provided by the pack upon entry fee payment. Additional kits can be purchased at the council office on Northway Rd in Williamsport. Cars must be free-wheeling with no starting devices and must be propelled by gravity only. Paint must be dry prior to the scheduled race day.

The front of the car must be constructed so that it does not overhang the starting gate system.

### B. Car Body

Accessories such as fenders, steering wheels, driver, etc. permissible as long as they do not exceed car specifications and are firmly in place. No loose materials will be allowed on the car.

There must be 3/8 inch clearance between the bottom of the car and the track surface.

Powered Graphite or BSA Axle Lube are the only type of lubricants allowed.

Lead weights must be painted or covered with tape so that the lead cannot be touched. No mercury!

### C. Wheels and Axels

Any wheels or axles may be used. The use of washers, bearings, bushings, spacers as well as the use of solid axles, any type of springs or suspension are allowed to be used on the car.

At least one wheel must touch the track surface.