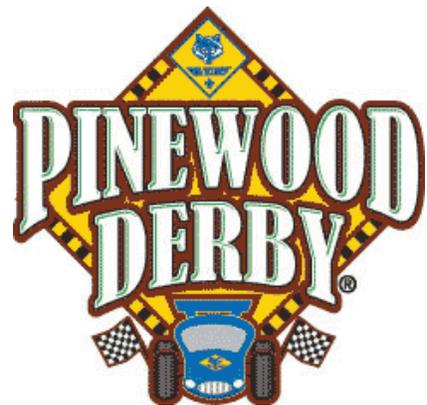




**OFFICIAL  
SCOUTING AMERICA  
RIVERSIDE DISTRICT  
PINWOOD DERBY RULES**



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# GENERAL

## G-1. Qualification

All registered Lion, Tiger, Wolf, Bear, Webelos and Arrow of Light scouts that place 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup> place in their Unit's Pinewood Derby may design, build and enter cars that are eligible to participate in the District Pinewood Derby event.

## G-2. Essential Materials

All cars entered shall be constructed from the "Official Grand Prix Pinewood Derby Kit" (referred to below as "the kit"). Kits may be purchased from the ScoutShop or elsewhere if they are the exact type manufactured or under the same specs as Scouting America's kit.

## G-3. Competitor Categories

Cub Scouts will compete with others in their rank, so there are six divisions: Lion, Tiger, Wolf, Bear, Webelos and Arrow of Light. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners in each Rank will move on to a Grand Finale.

## G-4. Attendance

Scouts are strongly encouraged to participate on race day, but if there are extenuating circumstances, the scout can delegate another scout in the pack to act on his behalf for the actual races. The registering scout still needs to build his own car.

## G-5. "New Car"

Construction of ALL entries MUST have begun AFTER last year's District Pinewood Derby races. You may not re-use a car constructed for a prior District Pinewood Derby race.

## G-6. Single Entry per Person

Each entrant in the District Pinewood Derby may only register once.

## G-7. Inspection and Registration:

Each car must pass a technical inspection before it may compete. Technical inspection and registration of the cars occurs prior to the start, and each car shall register no later than 15 minutes prior to the scheduled start time.

## G-8. Failure to Pass Inspection

The Inspection Committee shall disqualify cars which do not meet the rules as described herein. If a car does not pass inspection, the owner will be informed of the reason his/her car did not pass. Cars that fail the initial inspection may be modified and brought back no later than 15 minutes prior to the scheduled start time.

## G-9. Impound

No car may be altered in any way after it has been registered unless damaged. After a car passes registration, the Pinewood Derby Race committee will store it until race time.

## G-10. Car Design Rules Interpretation

Interpretation of all the rules described within this document is at the sole discretion of the Inspection Committee Judges present during the Registration and Inspection process.

## G-11. Race Day Rules Interpretation

On Race Day, the Cub Scouts must make all questions of rules interpretations and procedures to the Pinewood Derby Chairman or Race Officials promptly. Decisions of Race Officials on questions of rules interpretations and procedure may be appealed to the Pinewood Derby Chairman. All decisions of the Pinewood Derby Chairman are final. Decisions of Race Officials on questions of fact (i.e. the result of a specific race) may not be appealed beyond the Trackmaster and/or Finish Line Judges. **Note:** Unsportsmanlike conduct by any participant or spectator will be grounds for expulsion from the competition and/or the race area.

## G-12. Scout Involvement

This event is designed to be a parent and scout event. It was created to teach the scout the skills to build a car and promote good sportsmanship. We want our scouts to be able to say, "I did my best" and be happy with the results. We are requiring that each scout be involved in the building of his car based on his den level.

# RACE CAR DESIGN STANDARDS

## R-1. Material

Race cars shall be constructed for this event from the parts contained in the Official Grand Prix Pinewood Derby Kit (referred to below as "the kit") as sold by the Scout Shop. Materials from the kit may be supplemented but not replaced. Substitution of unofficial Scouting America materials (wood, wheels, or axles) is prohibited. Additional items may be added to the car as long as they comply with the rules and regulations stipulated within this document.

## R-2. Weight

Race cars may weigh no more than five (5.0) ounces (total weight) as determined on the official scales during the pre-race check-in.

## R-3. Wheels and Axles

The car shall roll on the official Scouting America wheels from the kit. The wheels shall turn about the axle nails from the kit. The axle nails shall be firmly affixed to the wood of the car body. It must be obvious to the judges that the wheels, and the nails from the kit are being used. Wheels and Axles may be slightly modified to remove imperfections.

## R-4. Size

Racecars may be no longer than 7 inches, nor wider than 2.75 inches, as determined by the official gauges used at the Registration and Inspection. Underside clearance of at least 0.375 inches and inside wheel-to-wheel clearance of at least 1.75 inches is recommended so that the car will run on the racetrack. The total height of the car shall not exceed the height of the finish timer (approx. 5 inches). Adequate clearance is the responsibility of the race car builder.

## R-5. Weights and Attachment

Weight may be added to the car and will be considered part of the car for purposes of all measurements. "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.

## R-6. Wheel Treatment

Wheel treatment (hub and tread smoothing and polishing) may not result in substantial removal of mass or in reducing the wheel width from the original kit wheels (original sidewall ridge dots must be visible and the contact surface flat). Wheels may not be machined to a beveled condition, thinned or rounded, or reshaped and the portion of the wheel surface that contacts the track must remain parallel to the axle. The car shall not ride on any type of springs or suspension.

## R-7. Unacceptable Construction

The following may NOT be used in conjunction with the wheels or axles: hubcaps, washers, inserts, sleeves, spacers, bushings or bearings. No portion of the car may extend beyond the starting pin, including the wheels. No moving parts or liquids may be used.

## R-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.

## R-9. Lubricants

Only dry lubricants such as powdered graphite or powdered Teflon "white lube" will be allowed for lubricating the wheels. *Lubricants may not foul the track.* There will be a lubrication table set up at the race. In the interest of fairness, only one lubrication application is allowed before the official registration.

# CONDUCT OF THE RACES

Competition will consist of heat races within each Rank, and a Grand Finale. Track officials are responsible for the proper conduct of the races.

## C-1. Inspection Gauges

The race-day official check-in area will have the official scale and length box. That check-in equipment will be the official equipment for the race.

(The same 5oz. Master Weight used for scale calibration pre-race check-in will also be available on race day. Please stress this fact to all Scouts. They should be prepared to make adjustments to their cars if necessary.

## C-2. Car Handling Responsibility

Scouts shall be responsible to present their own cars at the “Pit Stop” area for lubrication and will submit their cars to the registration/inspection area. After registration, the scout will not handle the cars unless repairs are deemed necessary by the Pinewood Derby Chairman

## C-3. Time Calculations and Awards

Each car will run once on each of the 3 lanes. Time for each run is measured from the nose of the car at the start position to the nose over the finish line. The 3 run times for each will be averaged together, and the lowest average time is the first-place winner. There will be a 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winner for each Rank. There will be an overall Championship race as a Grand Finale, and awards for the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> overall.

## C-4. Car Leaves Lane

If, during a race heat, a car leaves its lane but proceeds down the track in a manner that does not interfere with its opponent, then the race will be called normally. If the car leaves its lane and interferes with another car, the race will be re-staged and re-run. If the same car again leaves its lane and interferes with another car, that car will be disqualified from the heat.

## C-5. Car Leaves Track

If, during a race heat, a car leaves the track without interfering with its opponent, it shall be considered to have ended its heat at that point.

## C-6. Car Repair

If, during the race, a wheel falls off or the car becomes otherwise damaged, as approved by the Pinewood Derby Chairman, the SCOUT may, to the best of his ability, perform repairs with the assistance of his adult partner or Pit Crewmember.

## C-7. No Finishers

If during a race heat, no car reaches the finish line on the track, the car that went the farthest in its lane shall be declared as the heat winner.

## C-8. Track Fault

If a car leaves its lane, at his sole discretion, the Trackmaster may inspect the track, and if a track fault is found which probably caused the initial violation, the Trackmaster may order the race heat to be rerun after the track is repaired.

## C-9. Track Timer Fault

If during a race heat, the track timer fails to register finish time for the heat, the timer software will be restarted, and the heat will be rerun.

## C-10. The Race Area

Only race officials may enter the track area. This rule will be strictly enforced.

## C-11. Awards and Recognition

The most important values in Pinewood Derby competition are parent/scout participation, good sportsmanship, and learning how to follow rules. Racers in the District Pinewood Derby will be awarded 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place in each rank, and 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place in the overall Grand Finale championship race.

# THE RACING ENVIRONMENT

## E-1. Track Length and Drop

The track shall have a racing surface (starting line to finish line distance) of approximately 49 feet with a drop of approximately 4 feet.

## E-2. Track Slope

The track slope shall decrease from approximately 30 degrees at the starting line to approximately 0 degrees at the finish line.

## E-3. Lanes

Each lane will consist of a straight, smooth strip approximately 1.50 inches, but certainly less than 1.75 inches, wide and approximately 0.25 inches, but certainly less than 0.375 inches thick, centered on a smooth surface no less than 3.5 inches wide. Each car shall straddle such a strip during its heats.

## E-4. Starting Mechanism

The starting line shall consist of vertical pins of approximately 0.25 inches diameter, extending approximately 2 inches above the track surface and approximately centered in each lane.

## E-5. Finish Line Sensor Location

The track has electronics called “finish line sensors” that shall be in alignment with the corresponding starting line pin and be approximately centered in its lane.

## E-6. Finish Line Judging

The track timer system will be used to determine heat finish order and times. If the track timer system fails to record times, the heat may be rerun.

## E-7. The “Big Board”

The result of each heat will be displayed on an event chart called the “Big Board”. The Big Board will be located near the track.

## E-8. Finish Line Electronics Sensitivity

Track Finish Line Electronics, if used, must trigger correctly if a lead pencil is passed 0.75 inches above the track surface at a speed of 15 feet per second.

## E-9. Finish Line Clearance

Track Finish Line Electronics and other track accessories, if used must be no closer than 3 inches above the track.

# SPECIAL NOTE TO ALL CONCERNED

This project is a parent and scout event and is recommended as such by the National Scouting America. The Pinewood Derby Committee **STRONGLY SUGGESTS** that each parent emphasize this idea with your scout.

### **Sportsmanship:**

Two things the Pinewood Derby requires each participant to learn are 1) the craft skills necessary to build a car, and 2) the rules that must be followed. Even more important, though, is how we act and behave while participating in the Pinewood Derby or any other group activity. This is called sportsmanship.

The first thing to remember about sportsmanship is that everyone’s skills are a little different. You may be good at something like singing or drawing, but not as good at something else like basketball or computers. Parents have different skill levels too. This doesn’t mean that you are a good person one time and not a good another time. You can always be a good person, whether you have good car-building skills. Remember, you and your friends are individuals first and racers second. This idea is often called having respect for others.

The second thing to remember is to follow the rules. Without rules, there would be no Pinewood Derby. You will never know if you are good at doing something unless you follow the rules. This is often called being honest.

The third thing to remember about good sportsmanship is that there are winners and losers in every competition. You accept this when you choose to compete. There may be times when you win and feel happy, and times when you lose and feel unhappy. Being a winner is easy, and losing is sometimes hard. If you win, you must not brag or gloat. If you lose, you must not feel jealous or bitter. To be a good sportsman, you must be able to say, “I did my best” and be satisfied with the results. You must also be able to appreciate and feel happy for someone else when he or she run a good race or build a neat car.

## RACE SCHEDULE

**Note:** If not otherwise altered and published by the Pinewood Derby Chairman, this will be the race scheduled to be followed:

09:00 AM	Check-in Opens
09:45 AM	Webelos/AOLs check in deadline
10:00 AM	AOL Race Heats
10:30 AM	Webelos Race Heats
10:45 AM	Bear check in deadline
11:00 AM	Bear Race Heats
11:45 AM	Wolf check in deadline
12:00 PM	Wolf Race Heats
12:30 PM	Lunch Break
01:15 PM	Lions/Tigers check in deadline
01:30 PM	Tiger Race Heats
02:00 PM	Lion Race Heats
02:30 PM	Grand Prix Championship
03:00 PM	Awards (as soon as grand prix championship is done)