



Official Pinewood Derby Rules

The pinewood derby is one of the most popular and successful family activities in Cub Scouting. The pinewood derby car kit includes the wood to make your car, four axles, and four tires. Your car must be made from this kit to qualify for racing.

Please feel free to give guidance and minimal assistance to your Scout as they build their car. This is a chance for your child to be part of a team (them and you), to enjoy the spirit of friendly competition with their peers, and to experience the satisfaction of building their own car from the kit provided.

Our goal with the pinewood derby is that each participant will learn:

- ***Sportsmanship – caring about their competitors***
- ***Honesty - the ability to follow rules***
- ***Craftsmanship – the skill necessary to build a car (do your best!)***

Have Fun And Be A Good Sport!

All entrants must be registered and go through inspection before the green flag is waved on race day. Late arrivals to registration and inspection will only be allowed to run in the open heats after the race. Below are the rules for building the car:

Rule #1: All cars are to be built from the official pinewood derby kit available at the Scout Shop.

Rule #2: All cars must be constructed during the current year. Cars determined to be from a previous year's race will not be eligible.

Rule #3: All cars must pass a pre-race inspection and the decision of the race officials shall be final in determining eligibility. Specifications are detailed below.



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Length, Width and Clearance

- The maximum overall width of the car, including wheels and axles, shall not exceed 2¾ inches.
- The minimum width between the wheels shall be 1¾ inches so the car will clear the center guides on the track.
- The minimum clearance between the bottom of the car and the track surface shall be 3/8 inch so the car will clear the center guide strip on the track.
- The maximum overall length of the car shall not exceed 7 inches.
- The wheelbase (distance between the front and rear axles) may not be changed from the kit body distance of 4¼ inches.

Weight and Appearance

- The total weight of the car shall not exceed 5 ounces. The reading of the official scale will be considered final. The car may be hollowed out and built up to the maximum weight by the addition of wood or metal only, provided the material is securely built into the body or firmly affixed to it. No liquids or loose materials of any kind are permitted in or on the car.
- ***DO NOT put weights on the bottom of the car.*** This may interfere with the car traveling down the track and cause clearance issues with the center rail.
- Details such as steering wheel, driver, spoiler, decals, painting, and interior details are permissible if these details do not exceed the maximum length, width, or weight specifications. Lego drivers should always wear proper safety gear and seatbelts!
- Cars with wet paint will not be accepted.

Body, Wheels and Axles

- Scouts must use the block of wood provided in the official pinewood derby car kit. Pre-made and pre-cut bodies are not allowed.
- Axles and wheels shall be only official, unmodified, BSA approved wheels.
- Wheels may be lightly sanded to smooth out molding imperfections on the tread area. This light sanding is the only modification allowed. Beveling, tapering, thinning, or lathe turning of the wheels is prohibited.
- Axles may not be altered in any way except for polishing and removing burrs.
- Wheel bearings, washers, bushings, and hub caps are prohibited.
- The car shall not ride on any type of springs.
- The car must be freewheeling, with no starting device or other type of propulsion

Lubrication

- Only graphite or powdered Teflon "white lube" will be allowed for lubricating the wheels and axles.
- No liquid or gel lubrication is allowed.
- Lubrication is messy! Any lubrication must be applied prior to registration.



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Ground Rules and Competition

- The Championship Race is open to all Cub Scouts registered in the Monon District who finished in the top four of their Pack's Pinewood Derby.
- Each scout may enter only one car in the competition.
- The car must have been built during the current year (the school year in which the Derby is held). Cars that have competed in a previous year's Pinewood Derby are not permitted.
- During the race, if a car jumps the track, the heat will be run again. If the same car jumps the track a second time, that car will automatically lose that heat.
- If a car leaves its lane and interferes with another car, the heat will be run again. Cars will run in the same lanes as the original heat. If the same car leaves its lane a second time and interferes with another car, the interfering car will automatically lose that heat.
- If a car becomes damaged during a heat and can be repaired in a reasonable amount of time (as determined by the race officials), the heat will be run again. If the damaged car cannot be repaired, the results of the heat will stand.
- If a damaged car interferes with another car, the heat will be re-run regardless of whether the damaged car can be repaired or not.
- All disputes or questions regarding the rules will be resolved by the race officials. Any dispute over the decisions of the race officials will be resolved by a District Committee Member, whose decision is considered final.
- Please Remember: The Cub Scout Motto, "Do Your Best", also applies to the adult leaders who strive to run a fun and fair race.



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Pre-Race Registration Procedure

Please Pre-Register for the Race Online at:
<https://scoutingevent.com/160-MPWD2024>

- There is a \$5.00 fee to register for the race, payable online during pre-registration.
- When Scouts arrive on Race Day for check-in, their car will be inspected to insure it follows the specifications listed above.
- Any car which does not meet specifications will be returned to the Cub Scout for adjustments or modifications to pass inspection.
- All cars, whether racing in the Championship Race or in the Open Class must meet the specifications listed above.
- If using graphite or dry lubricant on the axles, it should be applied prior to check-in and official inspection.
- Once cars have passed inspection they will be placed in a confined area and will only be handled from that point forward by race officials.
- Cars will be returned to the scouts at the conclusion of the race.

Double Elimination Race Format

All cars will race in a double elimination format. Racing will take place on a four-lane track, with cars randomly chosen to race in heats. A first or second place finish in a heat is considered a “win”, and a third or fourth place finish is considered a “loss”. When a car receives its first loss it will be set aside. Heats will continue to be run until only two cars remain without a loss – those two cars are automatically in the Finals.

Then all the cars with one loss will be run in heats again. Cars that receive a second loss will be eliminated from the race. Heats will continue until all the cars have been run and only two cars remain with a single loss. These two cars will join the other two cars in the Finals.

For the Finals, the four remaining cars will run four heats. Each car will run one heat in each lane. Cars receive 1 point for a first-place finish, 2 points for second place, 3 points for third place and 4 points for last place. After four heats, the car with the lowest total score is the winner of the derby!



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Open Class Racing!!!

For those scouts who want another opportunity to race their Pinewood Derby car but did not finish in the top four of their pack derbies, we have the Open Class Race.

All Scouts who are not eligible to participate in the Championship Race are welcome to register for open class racing.

The top four finishers in the Open Class Race will win awards, as well as automatic entry into the Championship Race for a chance to win the District Championship!

The Open Class Race is still in the spirit of fun and friendly competition. All cars must comply with the requirements for car design and construction. Any car which cannot pass inspection will not be eligible for open class racing.

The same double-elimination race format as the Championship Race will be used for the Open Class Race.

If you would like to participate in the Open Class Race, please register online at:

<https://scoutingevent.com/160-MPWD2024>



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