

# Western Shores District

## 2023 Official Pinewood Derby Rules

The District Pinewood Derby event is like all Cub Scout events, we follow the Scout Law, with a specific emphasis on Courteous and Kind. All Cub Scout participants to the best of their ability construct the car adhering to the Cub Scout motto "Do Your Best." We encourage parent involvement and support as your child learns comradery, team work, tool skills, creativity, and most of all fun! Onto the rules.

### District Rules:

Derby Chairmen this year will be Chip Powell. The Derby Chairmen will make the final call on all rule interpretations. Please direct questions or concerns over the rules to Chip Powell, [chip@smdscouts.org](mailto:chip@smdscouts.org)

#### Section 1: General Rules and Considerations

1. Cub Scout must be actively registered Cub Scout in Western Shores District
2. 5<sup>th</sup> Grader Cub Scout who bridged to a Scout Troop in late 2022, early 2023 may participate
3. Pinewood Derby car must be built for the current year, no repeats or repaints are allowed
4. A completed car purchased from a third party is not allowed, it has to be of original design
5. The car may not be sent to a third-party facility for tuning or other performance enhancements.

### Pinewood Car Body

**Section 2:** The main body structure must be made of wood. The car design may be enhanced by the addition of other stable materials such as plastic and metal, but to not exceed the 5.00-ounce weight limit. The reading of the official scale will be considered final. Any additions must be firmly attached, non-moving, and meet car size specification and limits. Details such as steering wheels, diver, spoiler, finder, decals, paint and interior are permitted as long as these details do not exceed the maximum length, width or weight specifications.

We suggest that you insert weight inside the body or place it on the top of the car. Avoid placing thick (over 1/8") weight on the bottom of the car as that may destabilize the car on the stop section.

1. Car Width: Not to exceed 2 ¾ inches.
2. Car Length: Not to exceed 7 inches.
3. Car Weight: Not to exceed 5.0 ounces on a scale accurate to 1/10 ounce. \*\*
4. Car Height: Not to exceed 5 inches.
5. Car Clearance: Not less than 3/8 of an inch from the surface, to ensure proper clearance from the track surface. **Note: The wheels are the only part of the car allowed to touch the track.**
6. Center Rail Width: Wheels must clear the center guide rails, no less than 1 ¼ inches minimum.

7. Car Wheelbase: The distance between the center of the front and rear wheel must be no less than 4 inches. Only original prefabricated slots cut in the wood shall be utilized for wheel placement.
8. Car Front: The front leading edge of the car must be no more than 1 inch above the wheel lane of the track and be at least ½ inch wide at the center of the car. Nose of the car cannot have any “wedging” of the nose to gain an advantage in the starting gate. No part of the car may protrude beyond the starting pin.
9. The car must be propelled by gravity alone. Wheels must spin freely. Nothing may alter the wheel’s normal spin and rotation. No mechanical or artificial movement is allowed. Springs, magnets, mercury, propellants, electronic devices (except for lighting) are not allowed.

## **WHEELS AND AXLES**

1. Only BSA approved axles may be used on the car. Axles included with the Scout shop car kit are BSA approved axles. However, axles may be polished in a manner to remove burrs and decrease friction from the wheel.
2. At least 4 wheels must be attached to the sides of the car body in the prefabricated slots originally cut in the wood using the legal axles provided in the kits.
3. No object may be placed between the axle head and the wheel, or between the wheel and the car body. For example, no washers, bearings, bushings, or sleeves are allowed.
4. The car should be built with the intention that all 4 wheels are touching the racing surface. This is a visual test during pit check in: Any obvious attempt at having one wheel off the ground or tilted to gain a competitive advantage will be closely examined and may have the racer adjust the wheel prior to final pit check in. Once the car has passed the inspection the car is considered pitted (qualified).

If for any reason after the car is pitted and during the course of the race not all 4 wheels touch the track at the same time, the racer will not be disqualified and THIS IS NOT CONSIDERED A VIOLATION. Once a car is pitted it is considered fully qualified and accepted. Any further interpretation or questions should be directed to the Pinewood Derby Chairmen.

5. Wheels may be lightly polished or lightly sanded to remove normal molding imperfections. They may not be tooled or machined in any manner which will reduce the mass or weight, the initial inertia, or the original shape of the wheel. The BSA logo must be plainly visible on the outside of the wheel and there must be evidence that the car has previously raced and not altered after the race. Honing or machining a wheel so it becomes flat, convex or concave or minimizes the surface-to-surface contact will be subject to further review by the Committee, and may result in disqualification.
6. Only official BSA axles and wheels will pass inspection. Axles may not be altered in any way except for bur removal and polishing.

## LUBRICATION

1. Only powdered graphite will be allowed for lubricating wheels. Once a car is qualified, no further lubrication may be added to the car.

If during the pit inspection oiled axles are discovered the car could be disqualified from racing. Pinewood Derby Chairman will have to make the final judgement on how to resolve, to include having the racer remove and replace the wheels and axles prior to inspection. Simply said, DO NOT USE oil lubricants to avoid being disqualified.

## PIT REQUIREMENTS

The intention of pit check in is to provide the scouts with one more opportunity to comply with regulations and to avoid disqualifications. The car will be disqualified if it does not meet the required specifications one hour prior to race. Once the car has pass inspection the car cannot be modified in any way. If during the race the car malfunctions, the scout may not add any appreciable weight to the car during the repair. The scout must complete the repair before his next heat. The pit manager will oversee and approve the repair.

Cars failing to meet BSA rules (in kit) and district guidelines will NOT pass. If a car does not pass inspection, the Derby Chairman can elect to allow the car to race provided the car does not cause damage to the track or interfere with the path of any other car. A car that does not pass inspection and races will not be allowed to “win” a trophy. This rule is to ensure that all scouts can participate but only cars that comply with scout rules can win.

## GROUND RULES OF THE COMPETITION

The race is open to 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> place champions of packs registered in the Western Shores District. Each scout may only register one car in the competition. Scouts must use their winning car at the units pack pinewood derby competition. Fourth place car at the pack pinewood derby should be kept as alternate if 1st-3rd place winners cannot make district competition. Should all top three finishers attend the race, the fourth place alternate will be allowed to participate in the District Championship. It is recommended the Pinewood Derby Chairman from the Pack or Cubmaster should impound the winning top 4 cars, place them in a sealable container and bring them unaltered to the District Pinewood Derby where they will be given one hour to modify their car in the pit before the race. Each car should be labeled with Scout’s name and pack number (preferably on bottom of car).

We hope these rules will provide a guide to both the unit leaders and parents on how to support your youth in having fun Pinewood Derby this year. If you still have questions and require additional guidance, please feel free to contact the District Pinewood Derby Chairman, Chip Powell, [chip@smdscouts.org](mailto:chip@smdscouts.org) or (850) 499-3480.