

Pack 502 Pinewood Derby Rules – 2024

Last Updated: 1/18/2024

The Pinewood Derby is a fun event open to all scouts registered with Pack 502. It is designed to entertain with fair and casual competition. Crafting a car can be a challenge, and there's an opportunity to learn a little science, but there are always multiple paths to success. Please follow the rules outlined below to ensure the races are enjoyed by everyone.

DATE SCHEDULE

January 18, 2024 – Pinewood build workshop at the monthly pack meeting. Location is the Vineyard neighborhood pavilion (same side of Huebner as the school, next driveway to the north).

February 15, 2024 – Car inspection and turn-in at the Thursday pack meeting prior to Race Day. Cars are impounded until Race Day.

February 24, 2024 – RACE DAY! Derby setup begins at 12pm with racing starting at 2pm at the McGimsey Scout Park Sports Pavilion (past the pool on the left, across from the Dining Hall). The event should be complete by 5pm.

MOST IMPORTANT STUFF

It's important for the kids to have fun at this event and feel competitive while racing. Most car designs will have little to no impact on speed, and this is a great time to encourage imagination and creativity. The two things your scout needs to manage for a fast car is weight and friction.

Help your scout weigh their design to insure they hit exactly 5oz when complete. You can add bits of tungsten or lead (Amazon or local shops) for ballast, but any heavy metal will work. It's best to place weight above or on either side of the rear axle for stability and performance.

Friction is managed in two ways. The nail axles often have extra flash material between the head and shaft that can catch on the wheels and make them lock up. It can be removed with a file to prevent obstruction. When attaching the wheels to the body, a small amount of dry graphite lubricant can be applied to the spaces between the wheels and nails to smooth operation.

COMPETITION CATEGORIES

- **Speed:** Scouts compete for the fastest car within each den. Webelos and Arrows compete together. The five den winners and the next three fastest cars overall re-compete for the fastest car in the pack. Lowest total time across each set of heats determines the winner in each den/pack category.
- **Fastest-Looking:** Where style is more important than track performance.
- **Best Theme:** Inspired by a scout's fandom for something. For example: sports teams, animals, sci-fi/fantasy, superheroes, video games, movies/TV, music, scouting, school, patriotism (flag colors, USA/Texas, etc.), the military, foods/drinks, candy/snacks, F1/NASCAR/Rally/Drag racing, fire trucks/airplanes/boats, the weather, places to go (the beach, mountains), etc.
- **Funniest Car:** For designs with humor, something that makes the judges laugh.
- **Safest Driver:** Pinewood racing can be pretty dangerous with cars going at high speeds and sometimes even jumping off the track! So, this safety award goes to the car with the slowest speed.
- **Coolest-Looking:** Awarded to the scout whose car stands out as just really cool.
- **Scouts' Choice:** The favorite car of the scouts at the meet! Scouts will review the cars and vote for their pick!

ENTRY DETAILS

- Each Scout may enter one car.
- Cars from past races are not permitted.
- A name should be provided for the entry, ex. "Lightning."
- Scouts wishing to compete in the Theme category should clarify their inspiration (see Competition Categories above).
- Cars must pass inspection to compete. Once approved, cars are collected and secured until the race day. No further changes or additions can be made to a car after turn-in.

FAIRNESS & SPORTSMANSHIP

Derby races are meant to provide entertainment, crafts experience, and a little science knowledge. Cars should be built by the cub scouts with *some* adult guidance. It's important that cars entered for competition are not "parent cars." Technical assistance with concepts or tools should be fully explained to scouts, so they participate at all parts of the effort and can use that knowledge on future projects.

Parents or other non-scout relatives who wish to build their own derby cars are welcome to do so, but they can't compete against the kids for awards. We always allow some time after the formal races to run non-competitive cars or rematches on the track for fun.

CAR SPECIFICATIONS & BUILDING RULES

- Official BSA Pinewood Derby Car Kits only. Additional/replacement wood, axles, or wheels are available from the Scout Shop. Non-BSA hobby store or online kits and pre-cuts are unfair and not allowed.
- Cars must weigh 5 ounces or less. It's recommended to try to reach exactly 5 ounces exactly to compete for speed.
- Dimensions cannot be larger than 2.75 inches wide by 7 inches long.
- Wheels must be at least 1.75 inches apart (the width of the wooden block).
- At least 3/8-inch clearance underneath the body is required to prevent cars from becoming stuck on the track guides.
- The entire car must stage behind the track starting pin. Inset-middle front ends are not allowed. No part of the car should extend out in front of the starting pin.
- Decorative details such as steering wheels, drivers, or other kit-bashed theme elements are allowed as long as these additions do not exceed the design standards for racing. Additions do not have to be made of wood.
- Only dry axle/wheel lubricants such as graphite are allowed.
- All cars must have 4 wheels, and all wheels should touch the ground across the full width of each wheel. Intentional 3-wheel designs are unfair and prohibited.
- Wheels may not be cut, drilled, beveled, or rounded. Wheel bearings, washers, bushings, or springs are prohibited. The words "Official BSA Made in USA" must be intact and visible. Seams and imperfections can be removed from wheels or axles as part of clean-up and polishing to make the surfaces consistent.
- Accelerates and propellants are not permitted, e.g. springs, bands, jet packs, etc.

Any unforeseen circumstances during the race will be resolved by the Race Official who will use their best judgment to resolve the matter fairly. The decisions of the Race Official are final.