

# Official Rules for the 2024 Pack 6 Crestwood Pinewood Derby

Pack 6 Crestwood's official rules **supersede** the rules that come with the BSA Pinewood Derby Car Kit and conform to the Algonquin District Rules.

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**Race Date: Saturday, January 27, 2024 at Annunciation School Gym**

**3:00pm to 5:00pm:** Check-In & Inspection for Scouts and Siblings\* **6:00pm to 7:30pm:** Race

**\*Siblings Race:** Siblings may race for fun. Cars must adhere to construction rules but are not included in final standings.

**Shop Days in January:** See separate email to sign up for help cutting the block of wood

1. The Racer: **The Cub Scout MUST be present at the Check-In & Inspection** to enter his own car into competition.
2. Uniform: As an official BSA event, all participating **Cub Scouts must wear their full Class A Cub Scout uniform** (blue or tan uniform shirt, neckerchief, slide). Street clothes and Pack t-shirts are not suitable.
3. **All cars will be inspected and must meet Pack 6 Crestwood's construction rules (this entire document) in order to pass inspection and participate in the race.** The Pack has distributed Pinewood Derby kits to all registered scouts. The instructions in the kit are **superseded by the Pack's rules**. To highlight a few key Pack 6 rules...Axles (nails) **MUST** be installed in the pre-cut slots provided by the kit manufacturer (do not drill new holes); Plan to add weight to the car (maximum weight is 5.0 ounces); All four wheels must touch the track surface and roll (bent axles are prohibited; no "rail riding"). Axle guards are prohibited. See entire document for all rules.
4. **Construction of all entries MUST have begun AFTER Nov 1, 2023.** Cars made for prior years' races are not allowed.
5. A scout may only enter one car into the Pinewood Derby race.
6. **Two competitions will be held at the Pinewood Derby: one for speed and one for design.** All cars are eligible for both competitions.
7. The Pinewood Derby is meant to be a fun event for Cub Scouts and a fond memory for them in the future. Good sportsmanship and Scout Spirit is expected by scouts, parents, and all spectators.
8. **Construction Rules** All cars entered must be built using Official Pinewood Derby materials as sold by the BSA. Note! Not all BSA materials are permitted (e.g., polished axles, etc.). The approved materials are the main kit and wheels/axles (see below):



## BSA Pinewood Derby Car Kit

(uncut block of wood, nails (axles), and four wheels)

<https://www.scoutshop.org/official-pinewood-derby-car-kit-17006.html>



Use the black wheels from the original kit or purchase BSA colored wheels.

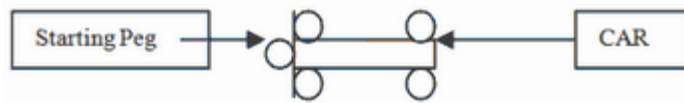
## Official Pinewood Derby Wheels and Axles

<https://www.scoutshop.org/pinewood-derby-blue-wheels-and-axles-647826.html>

**Please work with your son to make his own car.** Scouts **may add** decorative items, weights, glue, paint, lubricants, and finishing materials. Pre-made cars purchased from stores/online retailers are strictly prohibited. **Separately purchased items** such as speed kits, contoured pinewood bodies (e.g., pre-cut / pre-made cars) machined wheels; solid, bent, and/or polished axles; and axle guards **are specifically prohibited and are NOT allowed—even if sold by the BSA.**

## Length, Height, Width of Car & Track Clearance

- a) Maximum car length Must not exceed 7.0 inches.
- b) Maximum car height Must not exceed 5.0 inches from the bottom of the wheels to highest point on car.
- c) **NO Extended Wheel Base** **Axles (nails) MUST be installed in the pre-cut slots provided by the kit manufacturer.** Do NOT create new slots/drill new holes. The distance between the front and rear axles is 4 3/8 inches and will be inspected during check-in.
- d) Maximum overall width: Must not exceed 2 3/4 inches (including wheels and axles).
- e) Minimum width between wheels 1 3/4 inches (so car will clear the center guide strip on the race track).
- f) Minimum ground clearance 3/8<sup>ths</sup> of an inch between the bottom of the car and the bottom of the wheels) so the car will clear the center guide strip. If you add weight to the bottom of the car, cut out a notch so the weight is inset and flush with the bottom of the car.
- g) “Indented noses” are prohibited. The forward-most part of the car must contact the starting gate (starting peg) as shown in the diagram below:



No part of the car may protrude beyond the track start gate starting pin. The front edge of the car must not be more than 1 inch above the track surface and be at least 1/2 inch wide at the center of the car.

## **Weight and Appearance**

- h) Maximum weight of car is 5.0 ounces (141.7 grams). The readings of the official race scale will be considered final. If a car is overweight, or very underweight, racers will be allowed make adjustments at Check-In.

**Racers are advised to bring a personal supply of weight and tools to make any adjustments or modifications during check-in/inspection. Be Prepared--the Pack does not supply extra weights.**

\*A note regarding weight: The block of wood in the kit weighs around 2 ounces. You must add weight to the car so that it weighs up to, but no more, than 5.0 ounces. TIP! If you add weight to the bottom of the car, cut out a notch so the weight is inset and flush with the bottom of the car. This will ensure it conforms with the minimum ground clearance of 3/8<sup>ths</sup> of an inch. The minimum ground clearance prevents the bottom of the car from dragging along the track and never reaching the finish line.

The car may be hollowed out and built up to the maximum weight by the addition of wood, metal, plastic wood or metal filler only, provided that these materials are securely built into the car body or firmly affixed to the car body. No loose materials of any kind are permitted in or on the car.

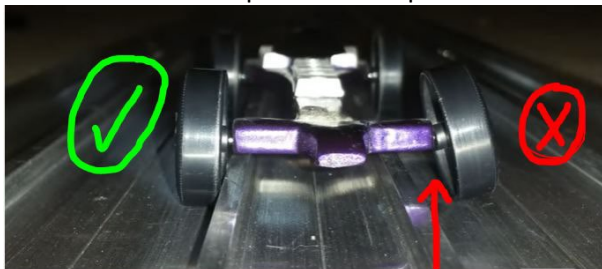
- i) Details, such as steering wheel, driver, spoiler, decals, painting, and interior details are permissible as long as these details do not cause the car to exceed the maximum length, width, and height specifications. Any item exceeding the maximum specifications must be removed at inspection. No loose material or moving parts of any kind (including fabric).
- j) Cars with wet paint will not be accepted to race.

## Wheels and Axles

- k) ONLY the Official BSA Pinewood Derby Wheels and Axles (axles are the four nails provided in the kit) may be used. You may use the black wheels provided in the official kit or you can purchase different colored wheels as sold by the BSA. No other manufacturers are permitted.

Separately purchased items—even if they are a BSA product—such as machined wheels, Pinewood Derby Lathed BSA Speed Wheels, solid, bent or polished axles, axle guards, “speed kits,” wheel bearings, washers, or bushings are specifically PROHIBITED.

- a. The ONLY wheel modification allowed is to lightly sand the wheels to remove any mold projection (flash) on the tread. However, this should not be necessary since the current manufacturing process has rarely produced a mold projection.
- b. All other wheel modifications are strictly prohibited, including beveling or tapering of the wheels (lathed wheel tread), smoothing the inside edge of the wheels, coned hubs, ball-reamed axle slot, etc.
- c. The ONLY axle modification allowed is to lightly polish the axle as part of the construction process.
- d. The following axle modifications are strictly prohibited: Bent axles (bent on your own or purchased) and purchased polished axles.
- e. Solid axles (a bar that connects two wheels) are strictly prohibited.
- f. Cars shall not ride on any type of springs.
- g. The car must be free-wheeling, with no starting devices or other propulsion.
- h. All four wheels must touch the track surface and roll. The car must roll on the full tread of each wheel, not the outer or inner edge. Bent axles are prohibited. Axles may be slightly canted (this means inclined at an angle), if needed at all, for alignment purposes or may be unintentionally canted due to the skill of the car maker such that they could not insert the axles exactly flat. Axles should not be intentionally canted/angled so much that the wheels are angled and/or “rail riding.” See photo below. Green check mark shows an acceptable wheel position. The Red X below shows a **prohibited** wheel position.



## Additional Rules

9. **Inspection & Corrections for Non-Compliance:** Each car must pass inspection by the Official Inspection Committee before it may compete. If a car does not pass inspection, the owner will be informed of the reason for failure and will be given time within the official Check-In time period to make the required adjustments.
10. **Lubrication:** Only dry lubricant, such as graphite, is permitted. Oils and silicone sprays are specifically prohibited as they may damage the track. All lubrication of wheels must take place prior to final inspection at the Check-In and Inspection. There will be no lubrication between racing heats.
11. **Impounding:** Once a car is registered, the Cub Scout will not have access to his car until the race concludes and all winners have been announced.
12. **Repairs & Re-Inspection:** If a car is damaged while racing, the scout and parent will have a few moments to quickly repair the car at which point the car must be re-inspected and meet original race specifications before it can race again. Cars can be re-inspected at any time and must be brought into compliance before their next scheduled race or be disqualified. (This rule is designed to make sure that a judge’s error during the initial Check-In does not preclude Track Officials from correcting a previous judging error.)
13. **Track Access:** Only Track Officials will be permitted in the track area. This rule will be strictly enforced.
14. **Race Committee has the final say on any and all disputes.**
15. **Scout Spirit:** Any participant or spectator who exhibits unsportsmanlike behavior will be asked to leave the premises at the absolute discretion of the Track Officials.