

BSA Cub Scout Pack 45 Pinewood Derby

Each year Pack 45 will hold a Pinewood Derby race event. The date, time and location will be announced on the Pack 45 website (<http://www.pack45nj.org>) as well as den and pack meetings so please keep a lookout for updates. The Pinewood Derby will consist of two race events. The first race will be the Official race. The second race will be an Outlaw race. Our objective is to make sure all scouts and family members have fun and will be able to participate with a car that will cross the finish line. The Outlaw race is intended to give those scouts without the benefit of a home workshop or advanced woodworking skills a better shot at making a racecar that crosses the finish line. It also allows any family member to participate. History has shown that the official wheel axels (the nails) are the Achilles heel of the Cub Scout racer. Retail stores sell speed axels that are much easier and robust than the nail axels. Such axels are not allowed in an official race. The intent of the Outlaw race is to relax the rules and allow reasonable modifications that would otherwise disqualify a racecar. **Racers should note the following:** Any car that is not built following the official race rules will not be allowed to race at any other scouting race event. This means that your car cannot compete at local, regional or state levels.

All races (Official and Outlaw)

1. The Derby race is open **only** to registered Cub Scouts, family members and friends of registered Cub Scouts. Official racecars should be built by the Cub Scout with adult guidance. Any technical assistance should be fully explained to the Cub Scout so that he can use that knowledge on future projects.
2. **RULES FOR ACCEPTANCE AND PARTICIPATION:** Rules for acceptance and participation in the event are the same for everyone without regard to race, color, national origin, or handicap.
3. Photo Release: Participants understand that by attending this program, sponsored by the BSA Cub Scout Pack 45 they impliedly consent to the use of photographs, film, videotapes, electronic representations and/or sound recordings made of the participants during that time by the BSA Cub Scout Pack 45, at their discretion, and release the BSA Cub Scout Pack 45 from any and all liability from such use and publication.
4. Rules for each race event: Rules for both Official and Outlaw races are included herein. Read over both sets of rules and decide which race you want to enter. Note that the Outlaw race is open to all scouts, family members and friends that have a car to race. The official race will be held for scouts only.
5. Prizes: Each race will have a First, Second and Third place winner. A special prize will be awarded to the Pack 45 Cub Scout with a derby car voted 'Best in Show'. An Outlaw car can qualify for this prize.

Official Pinewood Derby race rules

The following rules are designed to provide our Cub Scouts with a fair and fun atmosphere in which to race. At registration, each car will be weighed and inspected, to ensure its compliance with these rules. Cars which do not comply with these rules may be removed from the Official Competition at the discretion of the Derby committee. **BOYS ARE REQUIRED TO BUILD A NEW CAR EACH YEAR.** The official racers will be competing for First, Second and Third place medals (Gold, Silver and Bronze).

- **Materials:**

- All cars, **MUST** be constructed of the B.S.A.'s "Official Grand Prix Pinewood Derby Car Kit" (item no. WW17006). No other car kits or pre-made cars are acceptable, and will not be permitted.
- All parts which come with the official Derby kits must be used; conversely, parts from other sources may not be substituted in place of original parts.

- **Weight:**

- A car (including paint and decals) may weigh up to an including a maximum of 5 oz.
- The show scale weight will be official for all cars regardless of any other claims.
- Weight changes are permitted during the registration and inspection period, but not once the race has started.

- **Size and Dimensions:**

- The length of a car must be 7 inches or less.
- A car must be 2 11/16 inches wide or less.
- A car's wheels must be 1 7/8 inches apart (the original wheelbase measurement for the official B.S.A. Derby car kit).
- A car must have a clearance above the track of at least 7/16".
- A car's height cannot exceed 3 3/4 inches.
- The front end of a car may not include a "V" cut that allows any portion of the car's front end to extend past the tracks' starting pins, to avoid giving any cars unfair advantages.
- Extensive rounding or reshaping of the front end of a car (i.e., bringing a car to a point), which prevents use of the starting gate is not permitted.

- **Wheel and Axles:**
 - A car must use wheels and axles supplied in the official derby car kit.
 - Solid axles (i.e., one axle for 2 wheels) are not allowed for the official race. Such axles will be allowed in the Outlaw race however.
 - Springs or suspension systems may not be installed.
 - The built-in axle slots in the block must be used. The wheel axle slots cannot be altered.
 - Axles may be glued into a car (recommended).
 - Any burrs or mold excess may be removed from wheels.
 - No bearings, washers, bushings or other "non-kit" additions are allowed.
 - on wheels must be free-wheeling. Starting devices, flywheels, magnets or other motion enhancing devices are not permitted.
- **Lubrication:**
 - Only dry powder graphite or white B.S.A. Wheel and Axle Lubricant may be used to lubricate wheels and axles.
 - No oil, grease or silicone lubricants are allowed.
- **Loose Items:**
 - Any decorations or added weight must be permanently attached to a car with glue, nails, screws, etc.
 - No loose items of any kind are permitted in or on the car.
 - All attachments must conform to the original height, length, weight, wheelbase specifications listed above.
 - Items that detach from a car during a race will remain off.
- **Registration and Inspection:**
 - Each car must be registered, weighed and inspected prior to the race. You will be notified as to when the registration event will be held. Be sure to check the Pack 45 website for details.
 - All decisions of committee of the Derby concerning rules compliance are final.
 - All cars must be the official weight of 5 ounces or less - no exceptions.
 - Cars over the official weight of 5 ounces will be given a chance to reduce the weight to the official 5 ounces or less.

- **Impound Area:**
 - After registration and inspection, all cars will be kept in an "Impound Area."
 - No car will leave the "Impound Area" except for racing, until the participant's racing has been completed.
 - No alteration or modification of the car will be allowed once the car is in the impound area.
- **Racing times:** Racing times will be assigned by the racing software at random. Each car will race four times, once in each of the four lanes of the Pack 45 Pinewood Derby racetrack. Winners will be selected based on the best average time on all four lanes. **Racers should note that although their car may have been the fastest in their particular race their car might not have the best average time.**
- **Self Starting:** cars will be started simultaneously by a gate lever.
- **Crashes and breakdowns:**
 - If a car leaves the track or a wheel comes off before the car reaches the finish line, the race for that car alone will be re-run since the race is based on time only.
 - a one-time five minute pit stop will be allowed to repair a damaged car.
 - If a car cannot make it to the finish line in two subsequent attempts the car will be eliminated from the Official race. The scout will have a chance to repair the car for competition in the Outlaw race.
- **Interference:**
 - If a car leaves the track and crashes into another car, the race will be re-run for both cars. The offending car may be raced alone if the problem continues or is deemed necessary by the race officials. If a car cannot make it to the finish line in two subsequent attempts the car will be eliminated from the official race. The scout will have a chance to repair the car for competition in the Outlaw race.

If you have any questions, please contact the Pinewood Derby Committee:

Send email to: Pinewood.Derby@pack45nj.org

Outlaw Pinewood Derby race rules

The following rules are designed to provide our Cub Scouts, families and friends with a fair and fun atmosphere in which to race. At registration, each car will be weighed and inspected, to ensure its compliance with these rules. Cars which do not comply with these rules may be removed from the Outlaw Competition at the discretion of the Derby committee. The Outlaw racers will be competing for First, Second and Third place ribbons.

- **Materials:**

- All cars, SHOULD be constructed of the B.S.A.'s "Official Grand Prix Pinewood Derby Car Kit" (item no. WW17006).
- All parts which come with the official Derby kits may be used; conversely, parts from other sources may be substituted in place of original parts.

- **Weight:**

- A car (including paint and decals) may weigh up to a maximum of 5 oz.
- The show scale weight will be official for all cars regardless of any other claims.
- Weight changes are permitted during the registration and inspection period, but not once the race has started.

- **Size and Dimensions:**

- The length of a car must be 7 inches or less.
- A car must be 2 11/16 inches wide or less.
- A car's wheels must be 1 7/8 inches apart (the original wheelbase measurement for the official B.S.A. Derby car kit).
- A car must have a clearance above the track of at least 7/16".
- A car's height should not exceed 3 3/4 inches.
- The front end of a car may not include a "V" cut that allows any portion of the car's front end to extend past the tracks' starting pins, to avoid giving any cars unfair advantages.
- Extensive rounding or reshaping of the front end of a car (i.e., bringing a car to a point), which prevents use of the starting gate is not permitted.

- **Wheel and Axles:**

- A car may use wheels and axles supplied in the official derby car kit.
- Solid axles (i.e., one axle for 2 wheels) are allowed for the Outlaw race. Note: Such axels are **not** allowed in the Official race.
- Any burrs or mold excess may be removed from wheels.

- on wheels must be free-wheeling. Starting devices, flywheels, magnets or other motion enhancing devices are not permitted.
- **Lubrication:**
 - Only dry powder graphite or white B.S.A. Wheel and Axle Lubricant may be used to lubricate wheels and axles.
 - No oil, grease or silicone lubricants are allowed.
- **Loose Items:**
 - Any decorations or added weight must be permanently attached to a car with glue, nails, screws, etc.
 - No loose items of any kind are permitted in or on the car.
 - All attachments must conform to the original height, length, weight, wheelbase specifications listed above.
 - Items that detach from a car during a race will remain off.
- **Registration and Inspection:**
 - Each car must be registered, weighed and inspected prior to the race. You will be notified as to when the registration event will be held. Be sure to check the Pack 45 website for details.
 - All decisions of committee of the Derby concerning rules compliance are final.
 - All cars must be the official weight of 5 ounces or less. Overweight cars can race but cannot win a ribbon.
 - Cars over the official weight of 5 ounces will be given a chance to reduce the weight to the official 5 ounces or less.
- **Impound Area:**
 - After registration and inspection, all cars will be kept in an "Impound Area."
 - No car will leave the "Impound Area" except for racing, until the participant's racing has been completed.
 - No alteration or modification of the car will be allowed once the car is in the impound area.
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 - If a car leaves the track and crashes into another car, the race will be re-run for both cars. The offending car may be raced alone if the problem continues or is deemed necessary by the race officials. If a car cannot make it to the finish line in two subsequent attempts the car will be eliminated from the race

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