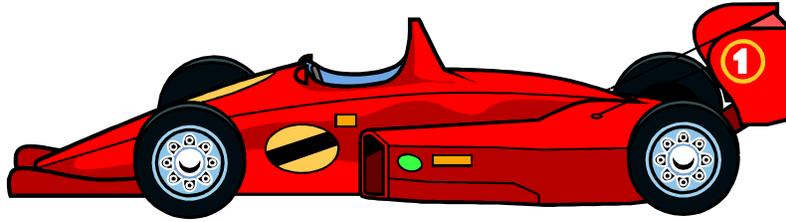


# ***Flintlock District Pinewood Derby***



## **Design and Construction Rules**

These rules are a combination of those found in the pinewood derby car kit and those used by other Packs in the Flintlock District. The overall intent of these is to ensure that the construction of the cars is within the capability of any boy without specialized tools or equipment and to avoid the use of techniques that might give one car an unfair advantage over another. Even if your Pack uses different rules for its own Pinewood Derby, any car entered from your Pack in the District Pinewood Derby must follow the rules presented here.

Your input on rule changes for next year is most welcome, but these are the rules that will be enforced for all cars entering the District Pinewood Derby this year.

1. Any car violating these rules will be disqualified from the competition. The cars will be inspected at check-in and will also receive a cursory check before each race. If a car is found to violate these rules after the Derby has begun, the car will be disqualified and its results will be deleted from all races in which it has participated. No substitutions will be allowed for disqualified cars.
2. The car must be newly built for the current Cub Scouting year. (Cars constructed for previous years are not eligible.) The racer's name and the year of construction shall be indicated on the bottom of the car. Race officials will permanently mark all cars entered to make checking for re-used cars easier in future years.
3. The Cub Scout should substantially build the car. Parental supervision in the construction of the car is encouraged.
4. The Race Director or Track Steward may disqualify any car that in their determination is not in compliance with the spirit of the Pinewood Derby race.
5. The body of the car must be made from the block of wood provided in the official BSA Pinewood Derby Kit (#17006). Cars constructed from pre-shaped body kits are forbidden. The wheel axles must be placed in the slots provided – wheelbase modifications are not allowed. Wheels may not be designed to ride upon the center or side guide strips of the track. Loose pieces that intentionally fall off of a car during a race are not permitted. If the front of the car is designed to gain an unfair advantage at the start or interferes with a fair start, the car will be disqualified. No part of the front wheels may extend beyond the front of the car body (the forward-most part of the car must not be wheel).

6. The axles of the car must be from the official BSA Pinewood Derby Kit or the official Pinewood Derby Axles and Wheels replacement kit (#17007). The axles may be smoothed or polished, but no change in dimension is allowed. Axles must be firmly attached to the car in the pre-formed slots provided on the block of wood, but adjustments to the slots for axle alignment are allowed. One-piece axles and other axles except as described above are prohibited. The use of a flexible suspension system of any type is prohibited. The car must be constructed to allow verification that the four individual axles are mounted in the pre-formed slots.
7. The wheels of the car must be from the official BSA Pinewood Derby Kit or the official Pinewood Derby Axles and Wheels replacement kit (#17007) or the BSA approved color wheels (#17553 thru 17557). Wheels may not be altered in any way. Mold projection defects on wheel treads may be removed by sanding lightly. The wheels may be smoothed or polished, but no change in their basic dimensions is allowed. The wheels must be attached to the car with the pins (axles) provided in the kit. No cars will be accepted in the Pack Pinewood Derby where bearings, washers, bushings, spacers, wheel covers, or hub caps are used as part of the wheel assembly. The official wheel width is 0.34" and must not be altered.
8. Only dry lubricating powder (graphite or white powder such as the BSA white axle lube (17106) and BSA Graphite (#17019) may be used to lubricate the wheels. (Warning – other lubricants may damage the plastic wheels and keep them from turning freely.) The District will NOT provide lubricants. Once the car is impounded, it may NOT be re-lubricated except when a wheel is damaged or becomes dislodged during a race. Graphite must be applied in the designated locations or outside of the racing venue.
9. The total weight of the car may not exceed 5.00 ounces. Weights or other additions must be rigidly connected – no loose or moveable weights (including lead shot or sand) are allowed. The maximum width of the car, including wheels, may not exceed 2.75 inches. The maximum length of the car may not exceed 7.0 inches. The maximum height of the car, when sitting level, may not exceed 2.75 inches. Underside “ground” clearance of at least 3/8 (0.375) inches and inside wheel to wheel clearance of at least 1-3/4 (1.75) inches is required so that the car will run smoothly on the race track, which uses a center strip to guide the cars.
10. A single, calibrated, electronic scale will be used to weigh all cars. Cars will not be accepted if their weight exceeds five (5.00) ounces by even the smallest resolution (0.01 ounces) of the scale. Not all scales are the same, please come prepared to make modifications as necessary to meet the 5.00 ounce weight restriction.
11. A wooden jig will be used to determine if the car complies with the length, width, height, and ground clearance limitations. The car must smoothly pass through the openings of the jig to be considered within specifications.
12. A Cub Scout whose car fails any part of the inspection will, time allowing, be given the opportunity to make adjustments to the car. Cars will be re-weighed, re-measured, and re-inspected until they comply or until the scheduled inspection time expires.
13. After the car has passed inspection, it will be "impounded" by race officials to await the race. Cars may not be handled (except by race officials) after inspection until they are scheduled to compete.

14. Cars will be protected from handling by anyone except the race officials and the car owner. Cars may not be adjusted or modified after they are impounded.
15. A car number will be assigned as Scouts arrive. It will be placed on the car after weigh-in with an easily removable sticker.
16. Track attendants will determine the front of the car based on the orientation of the number placed at check-in time. The Scout will be asked to identify the front of the car at check-in.

*Revised, December 2010*

## Race Conduct Rules

The Track Steward and track officials are responsible for the proper conduct of the races. Decisions of track officials on questions of rules interpretations and procedure may be appealed to the Race Director. Decisions of track officials on questions of fact may not be appealed beyond the Race Director. Scouts AND PARENTS should also be familiar with these rules.

1. Car Handling Responsibility: Track officials shall be responsible to stage all cars at the starting line. Scouts may be asked to retrieve their own car at the finish line and return it to the staging area.
2. Lane Assignment: Lane assignment for each heat shall be randomly determined with a best effort made to allow each car to run one heat in each lane.
3. Car Repair: If, during the race, a wheel falls off or the car becomes otherwise damaged, then the Cub may, to the best of his ability, perform repairs. The Cub may seek advice for repairing the car, but may receive no other assistance. If a car is damaged due to track fault or due to fault of another car or Cub, then the Track Steward, at his sole discretion, may allow additional repair assistance.
4. Car Interference: If, during a race heat, a car leaves its lane and, in so doing, interferes with another racer, then the car at fault shall be declared to have lost the race heat. (However, see "7. Track Fault".) If, in the opinion of the Track Steward, the outcome of the race was materially affected, then the heat will be re-run with the non-offending cars.
5. Car Leaves Lane: If, during a race heat, a car leaves its lane but proceeds down the track in a manner that does not interfere with its opponent, then the race will be called normally. (However, see "7. Track Fault".)
6. Car Leaves Track: If, during a race heat, a car leaves the track without interfering with its opponent, it shall be considered to have ended its heat at that point. (However, see "7. Track Fault".)
7. Track Fault: If a car leaves its lane, at his sole discretion, the Track Steward may inspect the track and, if a track fault is found which in his determination caused the initial violation, the Track Steward may order the race heat to be rerun after the track is repaired.
8. No Finishers: If, during a race heat, no car reaches the finish line on the track, the car that went the farthest in its lane shall be declared as the heat winner.
9. In the event of a failure of the timing mechanism or any other malfunction that causes the results of the heat to be indeterminate or unrecorded, the Track Steward may order the race heat to be rerun.