

# OFFICIAL KETTLE COUNTRY DISTRICT PINEWOOD DERBY

## EVENTS RULES AND PROCEDURES

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## I. GENERAL RULES: (Applies to all Race Events)

**G-1. Qualification:** All registered Kettle Country District Lion, Tiger, Wolf, Bear, and 4<sup>th</sup> grade Webelos Scouts may design, build, and enter cars that are eligible to participate in the “Cub Scout Race” event.

**Per Council Rules – 5<sup>th</sup> grade Arrow of Lights are not allowed to participate in the District race.**

**G-2. Essential Materials:** All cars entered shall be constructed from the “Official Grand Prix Pinewood Derby Kit” (referred to below as the kit) as available from any Scout Shop or store selling official BSA supplies.

**G-3. Competitor Categories:** All Lion Cubs, Tiger Cubs, Cub Scouts, and Webelos Scouts that are registered will compete against all other entrants. There will be just one division for racing.

**G-4. Attendance and Uniform:** The Cub Scout MUST enter their own car. This means that the Cub Scout must be present and IN UNIFORM at “Inspection and Registration” to enter the car into competition. No uniform. No race. The scout must be present during the entire race and must also be present to receive an award if they win.

**G-5. “New Work”:** Construction of ALL entries MUST have begun AFTER last year’s Kettle Country District Pinewood Derby Races.

**G-6. Single Entry per Person:** Only One car may be registered by any person in the Pinewood Derby.

**G-7. Inspection and Registration:** Each car must pass a technical inspection before it may compete.

Technical inspection will be accomplished on race day during sign-in. Registration and fees must be submitted through the Double-Knot on the Bay-Lakes Council website no later than the date listed.

**G-8. Failure to Pass Inspection:** The Inspection Committee shall disqualify cars that do not meet the rules as described herein. If a car does not pass inspection, the owner will be informed of the reason the car did not pass. Cars which fail the initial inspection may be allowed to be adjusted i.e., weight added or removed to pass inspection.

**G-9. Impound:** No car may be altered in any way after it has been inspected. After a car passes inspection, it will be placed in the pits until race time.

**G-10. Car Design Rules Interpretation:** Interpretation of the rules described in G1 through G-9, and T-1 through T-9 are at the sole discretion of the Inspection Committee Judges present during the Registration and Inspection process.

**G-11. Race-Day Rules Interpretation:** On Race-Day, the Cub Scout must make all questions of rules interpretations and procedures to the Pinewood Derby Chairman or Race Officials promptly. Decisions of Race Officials on questions of rules interpretations and procedure may be appealed to the Pinewood Derby Chairman. All decisions of the Pinewood Derby Chairman are final. Decisions of Race Officials on questions of fact (i.e., the result of a specific race) may not be appealed beyond the Trackmaster. **Note:** Unsportsmanlike conduct by any participant or spectator will be grounds for expulsion from the competition and/or the race area.

**G-12. Help Needed:** On Race Day each pack is to send one adult leader or parent to help with Running the Derby. This may be before, during, or after for cleanup.

## II. CUB SCOUT RACE CAR AND SHOW CAR DESIGN STANDARDS

**T-1. Material:** Race cars shall be constructed for this event from the parts contained in the Official Grand Prix Pinewood Derby Kit (referred to below as the kit) as sold by any Scout Service Center or Official BSA supplier. Materials from the kit may be supplemented but not replaced. (One exception found under wheels and axles)

**T-2. Weight:** Race cars may weigh no more than five (5) ounces, or 141.75 grams (total weight) as determined on the official scales during the pre-race check-in.

**T-3. Wheels and Axles:** The car shall roll on the wheels from the kit. The wheels shall turn about the axle nails from the kit. NO solid axles. The axle nails shall be firmly affixed to the wood of the car body. The wheelbase MAY be lengthened provided the total car length does not exceed 7 inches including the wheels. It must be obvious to the judges that the wheels and nails from the kit are being used. (One exception: You are allowed to replace the wheels with colored BSA wheels if you wish. It must be apparent that they are BSA wheels.)

**T-4. Size:** Racecars may be no longer than 7 inches, nor wider than 2-3/4 (2.75) inches, as determined by the official gages during the Registration and Inspection. **No part of the car may protrude past the starting Gate.** Underside clearance of a least 3/8 (0.375) inches and inside wheel-to-wheel clearance of at least 1-3/4 (1.75) inches is recommended, so that the car will run on the racetrack. Adequate clearance is the responsibility of the racecar builder.

**T-5. Weights and Attachment:** Weight may be added to the car and will be considered part of the car for purposes of all measurements. "Weight" is any material on the car that is not provided in the kit. All weight must be securely fastened to the car, e.g., by permanent glue, nails, or screw, but not by "sticky substances", e.g., tape, or tack spray. **Weights may not protrude below the bottom edge of the car.** Weights shall be passive, i.e., non-moveable, non-magnetic, nonelectric, non-sticky, etc.

**T-6. Wheel Treatment:** Wheel treatment (hub and tread smoothing and polishing) may not result in substantial removal of mass nor in reducing the wheel width from the original kit wheels. Some of the original "tread marks" on the wheel face must remain intact, i.e., apparent to the inspector. Wheels may not be machined to a beveled condition or "rounded off."

**T-7. Unacceptable Construction:** The following may NOT be used in conjunction with the wheels or axles: hubcaps, washers, inserts, sleeves, and bearings.

**T-8. Gravity Powered:** The racecar may not be constructed or treated in such a way that the track's starting mechanism imparts momentum to the car. (For instance, this provision disqualifies cars with sticky substances on the front of the car and protrusions, which may catch on the starting pin.)

**T-9. Lubricants:** Only dry lubricants such as graphite or powdered Teflon "white lube" will be allowed for lubricating the wheels. Lubricants may not foul the track. There will be a lubrication table set-up at the race. In the interest of fairness, lubrication is allowed only before inspection.

### III. CONDUCT OF THE RACES

Competition will consist of all racers competing in one "Division". Track officials are responsible for the proper conduct of the races.

**C-1. Inspection Gages:** The race-day "Pit Stop" area will have the official scale and length box. That checking equipment will be the official equipment for the race. (The same 5oz. Master Weight used for scale calibration in pre-race check-in will also be available on race day. Please stress this is fact to all Cub Scouts. They should be prepared to make adjustments to their cars if necessary.)

**C-2. Race Day Lubrication:** There will be a lubrication table set up at the race. In the interest of fairness, lubrications only allowed before inspection and check-in.

**C-3. Cars with Lights:** If a car has lighting installed, lights must be turned off once checked into the race pits.

**C-4. Car Handling Responsibility:** Race Day officials will handle all cars after check-in. This prevents tampering and possible damage due to mishandling. The "Starter Team" will stage cars on the tracks.

**C-5. Lane Assignments:** To equalize differences among track lanes, the computer software will randomly assign lanes to all cars so that each car will race in each lane once.

**C-6. Car Leaves Lane:** If, during a race heat, a car leaves the lane the race will be restaged and re-run.

**C-7. Car Leaves Track:** If, during a race heat, a car leaves the track the race will be restaged and re-run.

**C-8. Car Repair (Without Fault):** If, during the race, a wheel falls off or the car becomes otherwise damaged, then the SCOUT may, to the best of their ability perform repairs with the assistance of their adult partner or Pit Crewmember.

**C-9. Car Repair (With Fault):** If a car is damaged due to the track fault, or damage caused by another car or person, then the Track master, at their sole discretion, may allow additional repair assistance to the Cub.

**C-10. Scoring:** The scoring is based purely on the elapsed time of each car. Each car will race in each lane once for a total of 6 times. The computer then takes the 6 times remove the slowest and averages them, and ranks the cars based on average times.

**C-11. Track Fault:** If a car leaves its lane, at the sole discretion, the Trackmaster may inspect the track and, if a track fault is found which probably caused the initial violation, the Trackmaster may order the race heat to be rerun after the track is repaired.

**C-12. The Race Area:** Only race officials may enter the track area. This is the area behind the checkered pennants. This rule will be strictly enforced.

**C-13. Rewards and Recognition:** The most important values in Pinewood Derby competition are parent/child participation, good sportsmanship and learning how to follow rules. The Awards Committee is responsible for recognizing and encouraging these qualities in addition to traditional racing awards. Racers will be recognized as follows:

- a.) Every participating Scout will receive a Pinewood Derby Patch.
- b.) Show trophies will be awarded to the first, second, third, fourth and fifth-place finishers.
- c.) Race trophies will be awarded for the first thru tenth-place finishers overall in the Kettle Country District.
- d.) Rank trophies will be awarded for the top finishers for each rank (Lion, Tiger, Wolf, Bear, & Webelos I) after the top ten finishers. In addition, an award will be presented for the most fuel efficient (last place).
- e.) Scout must be present during the entire race and must be present to win an award.

**Per Council Rules - 5<sup>th</sup> grade (2<sup>nd</sup> year) Webelos are not allowed to enter cars.**

## **IV. THE RACING ENVIRONMENT**

**R-1. Track Length and Drop:** The track has a racing surface (starting line to finish line distance) of approximately 42 feet with an approximate drop of 4 feet.

**R-2. Track Slope:** The track slope is approximately 26 degrees in the first 16 feet and flat the remaining 34 feet.

**R-3. Lanes:** Each lane is molded from extruded aluminum providing extremely consistent lanes the entire length of the track.

**R-4. Starting Mechanism:** The “starting line” consists of vertical pins of approximately 1/4-inch diameter, extending approximately 1 inch above the track surface and approximately centered in each lane.

**R-5. Finish Line Sensor Location:** The track has infrared lights called “finish line sensor” that are in alignment with the corresponding sensors in the electronic Track Timer system above each lane.

**R-6. “Big Board”** The result of each race will be displayed on the computer projector display called the “Big Board”. The Big Board will be in the front of the auditorium.

**R-7. Finish Line Electronics Sensitivity:** The electronic Track Timer displays and records finish times to within .001 of a second. The sensors are less than 1/8-inch diameter, which provides very precise results. The timer will designate a tie if two cars finish closer than .0002 of a second.

## V. SPECIAL NOTES TO ALL CONCERNED

This project is a parent and child event and is recommended as such by the National Boy Scouts of America. The Pinewood Derby Committee **STRONGLY SUGGESTS** that each parent emphasize this idea with your child. In all the events, we require that the cars be built this year.

### Sportsmanship:

Two things the Pinewood derby requires each participant to learn are 1) the craft skills necessary to build a car, and 2) the rules that must be followed. Even more important, though, is how we act and behave while participating in the Pinewood Derby or any other group activity. This is called sportsmanship.

The first thing to remember about sportsmanship is that everyone's skills are a little different. You may be good at something like singing or drawing, but not as good at something else like basketball or computers. Parents have different skill levels, too. This does not mean that you are a good person one time and not good another time. You can always be a good person, whether you have good car-building skills. Remember, you and your friends are individuals first and racers second. This idea is often called having respect for others.

The second thing to remember is to follow the rules. Without rules, there would be no Pinewood Derby. You will never know if you are good at doing something unless you follow the rules. This is often called being honest.

The third thing to remember about good sportsmanship is that there are winners and losers in every competition. You accept this when you choose to compete. There may be times when you win and feel happy, and times when you lose and feel unhappy. Being a winner is easy and losing is sometimes hard. If you win, you must not brag or gloat. If you lose, you must not feel jealous or bitter. To be a good sportsman, you must be able to say, "I did my best" and be satisfied with the results. You must also be able to appreciate and feel happy for someone else when they run a good race or build a neat car.