

OFFICIAL PACK 4026 PINWOOD DERBY EVENT RULES & PROCEDURES

Inspection Night: TBA
Race Day: Saturday January 23, 2021

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I. GENERAL RULES (Applies to all Race Events)

- G-1. **Qualification:** All registered Pack 4026 Cub Scouts may design, build and enter cars that are eligible to participate in the "Cub Scout Pinewood Derby" event. Parents, guardians, or siblings of Cub Scouts registered in Pack 4026 may design, build and enter cars that are eligible to participate in the "Open Class Race" event. Scouting alumni and Den Chiefs may also participate in the "Open Class Race" event.
- G-2. **Essential Materials:** All cars entered shall be constructed from the "Official Grand Prix Pinewood Derby Kit" (referred to below as the kit). Each registered Scout in the Pack will receive a Derby Kit provided by the Pack. Non-registered scouts will be required to pay a fee, to cover a car kit and participation, set by the Derby Master.
- G-3. **Competitor Categories:** All Cub Scouts that are registered within Pack 4026, will race against other Scouts. The Scouts will race at random against scouts in their own den. First, second, and third place will be awarded in each Den. The first, second and third place winners in each Den will move on to the championship.
- G-4. **Attendance:** All "Drivers" meaning Cub Scouts, siblings, adults or Alumni MUST enter his/her own car in person. This means that the Driver must be present at both "Inspection and Registration" on the Friday evening before the Derby to enter his car into competition and Race Day.
- G-5. **New Work:** Construction of ALL entries MUST have begun AFTER last year's Pack 4026 Pinewood Derby Races. The idea is to build a new car with our children.
- G-6. **Single Entry per Person:** Only one car may be registered by any one person in the Pinewood Derby.

- G-7. **Inspection and Registration:** Each car must pass a technical inspection before it may compete. Technical inspection and registration of cars occurs on the Friday before the race.
- G-8. **Late Inspection and Registration:** If a Cub Scout fails to register his car at the "Inspection and Registration" deadline, the Scout may race in the "Open Class" race and not with the other scouts.
- G-9. **Failure to Pass Inspection:** The Inspection Committee shall disqualify cars, which do not meet the rules as described herein. If a car does not pass inspection, the owner will be informed of the reason his car did not pass. Cars, which fail the initial inspection, may be fixed prior to inspection closing or taken home for modifications and brought back on race day for final inspection and registration for the "Open Class" race. Disqualified cars will not race.
- G-10. **Impound:** No car may be altered in any way after it has been registered. After a car passes registration, the Pinewood Derby Race Committee will store it until race day. This means that all cars passing inspection will remain in a secured location until the race the following day.
- G-11. **Car Design Rules Interpretation:** Interpretation of the rules described in G1 through G-11, and T-1 thru T-10 are at the sole discretion of the Inspection Committee Judges present during the Registration and Inspection process.
- G12. **Race-Day Rules Interpretation:** On Race-Day, the Cub Scout or other drivers must make all questions of rules interpretations and procedures to the Pinewood Derby Master or Race Officials promptly. Decisions of Race Officials on questions of rules interpretations and procedure may be appealed to the Pinewood Derby Master. All decisions of the Pinewood Derby Master are final. Decisions of Race Officials on questions of fact (i.e. the result of a specific race) are final. Note: Unsportsmanlike conduct by any participant or spectator will be grounds for expulsion from the competition and/or the race area. Remember, we race to have fun!

II. CUB SCOUT RACE 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 the BSA. Materials from the kit may be supplemented but not replaced.
- T-2. **Weight:** Race cars may weigh no more than five (5.0) ounces (total weight) as determined on the official scales during the pre-race check-in. Note: The official scale will be available at the weigh in night.
- T-3. **Wheels and Axles:** The car shall roll on the wheels similar to the ones in the kit, with the only difference being color. The wheels shall turn about the axle nails from the kit. The axle nails shall be firmly affixed to the wood of the car body, and **MUST** be placed so the distance between the axles match the distance between the original grooves (wheel base). It must be obvious to the judges that the wheelbase, wheels, and the nails from the kit are being used.
- T-4. **Size:** Racecars may be no longer than 7 inches, nor wider than 2-3/4 (2.75) inches, nor taller than 5-3/4 (5.75) inches as determined by the official gages during the Inspection and Registration. Underside 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 recommended, so that the car will run on the racetrack. Adequate clearance is the responsibility of the

racecar builder. Physical dimension restrictions are to ensure the cars fit on the track without interfering with other cars or the track itself or the finish line mechanism.

- 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 considered to be 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 screws, but not by "sticky substances", e.g. tape, or tack spray. 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 and the portion of the wheel surface that contacts the track must remain parallel to the axle.
- 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 must not foul the track. There will be a lubrication table set up at the weigh in. No addition lubrication will be allowed once the car has passed inspection and is entered into the secure area.
- T-10. **Each car will be pre-assigned a number by the race committee.** This number must be visible on the rear of the car using the numbered stickers that come with the car kit. It is a good idea to place the Scouts name on the underside of the car as a backup.

III. CONDUCT OF THE RACES

Competition will consist of heat races for the entire Pack, and a series of final heats at the Championship level. Track officials are responsible for the proper conduct of the races.

- C-1. **Inspection Gages:** The weigh in "Pit Stop" area will have the official scale and length box. That check-in equipment will be the official equipment for the race. (The same Master scale used for weigh in will also be available on race day. Please stress this fact to all Cub Scouts. They should be prepared to make adjustments to their cars if necessary on the weigh in night.)
- C-2. **Pre-Race Lubrication:** There will be a lubrication table set up at the weigh in. Lubrication is allowed only before check in.
- C-3. **Car Handling Responsibility:** Scouts shall be responsible to present their own cars at the Inspection Night for weigh in. After entered into the secured area only designated Race Officials shall handle Derby Cars. All Derby Cars will be staged and placed on the Track by Race Officials.
- C-4. **Lane Assignment:** To equalize differences among track lanes, each car will race one heat in each lane (four races). The best time of the four heats will determine your

placement in your den. The top three racers from each Den will move on to the Championship round. The Championship round will follow the same pattern.

- C-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 restaged and re-run. If the car leaves its lane and interferes with another car, the race will be re-staged and re-run. If the same car again leaves its lane and interferes with another car, that car will be judged fourth place and the race will be re-staged and rerun without that car.
- C-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 and will be manually timed out.
- C-7. **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 his ability perform repairs with the assistance of his adult partner or Pit Crewmember. The car will be re-checked by race officials and returned to staging.
- C-8 **Car Repair (With Fault):** If a car is damaged due to track fault, or damage caused by another car or person, then the Derby Master, at his sole discretion, may allow additional repair assistance to the Cub. The car will be re-checked by race officials and returned to staging.
- C-9. **No Finishers:** If, during a race heat, no car reaches the finish line on the track, the car which went the farthest in its lane shall be declared as the heat winner. The timers will be tripped after 10 seconds to record a time.
- C-10. **Call to Race:** Competitors will be called by car number prior to each heat. When his car number is called, the scout's car will be retrieved from "the stage" and posted at the starting gate.
- C-11. **Track Champions:** The Champions from each Den shall be announced. These cars will be staged for the Championship Race. Inspection and repair as necessary, all performed solely by the Cub Scout, will be permitted prior to the start of the Final Heats.
- C-12. **Track Fault:** If a car leaves its lane, at his sole discretion, the Derby Master may inspect the track and, if a track fault is found which probably caused the initial violation, the Derby Master may order the race heat to be rerun after the track is repaired.
- C-13. **The Race Area:** Only race officials may enter the track area. This rule will be strictly enforced.
- C-14. **Awards and Recognition:** The most important values in Pinewood Derby competition are parent/son 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 segment.
 - b.) Certificates and/or ribbons will be awarded for cars winning in unique appearance categories such as: Best Scout Theme, Most Humorous, Coolest, Most Realistic, Most Inspirational, Most Non-Derby Car, Most Fuel Efficient, People's Choice, Rookie of the Year, Cubmaster's Favorite, Derby Master's Favorite and any other cool category recommended by the Derby Committee. Recognition may also be given for Scout's showing Good Sportsmanship throughout the event.
 - c) Trophies will be awarded to the first, second and third-place finishers in each Den.

- d) Trophies will be awarded for the first, second and third-place finishers in the Pack 4026 Grand Championships.

IV. THE RACING ENVIRONMENT

- R-1. **Track Length and Drop:** The track shall have a racing surface (starting line to finish line distance) of approximately 28 feet with a drop of approximately 4 feet.
- R-2. **Track Slope:** The track slope shall decrease from approximately 30 degrees at the starting line to approximately 0 degrees at the finish line.
- R-3. **Lanes:** Each lane will consist of a straight, smooth aluminum strip approximately 1-1/2 (1.50) inches, but certainly less than 1-3/4 (1.75) inches, wide and approximately 1/4 (0.25) inches, but certainly less than 3/8 (0.375) inches thick, centered on a smooth surface no less than 4 inches wide. Each racecar shall straddle such a strip during its heats.
- R-4. **Starting Mechanism:** The "starting line" shall consist of vertical pins of approximately 1/4 inch diameter, extending approximately 1 inch above the track surface and approximately centered in the each lane.
- R-5. **Finish Line Sensor Location:** The track has electronics called "finish line sensors" that shall be in alignment with the corresponding starting line pin and be approximately centered in its lane.
- R-6. **Finish Line Judging:** An impartial Finish Line Judge shall be at station to observe each heat, on each track. Heat finish judging is determined by the finish line sensor, but may be challenged by a majority rule of the Finish Line Judge. If the track's electronic finish line sensor's result is challenged by the Finish Line Judge, the race will be restaged and re-run.
- R-7. **Finish Line Judge Backup:** Finish Line Judges will temporarily excuse themselves if they know that one of the heat contestants is a son or relative. Backup Finish Line Judges shall be available in case a judge needs to be excused for any reason.
- R-9. **Finish Line Electronics Sensitivity:** Track Finish Line Electronics, if used, must trigger correctly if a lead pencil is passed 3/4 (0.75) inches above the track surface at a speed of 15 feet per second.
- R-10. **Finish Line Clearance:** Track Finish Line Electronics and other track accessories, if used, must be no closer than 3 inches above the track.

V. OPEN CLASS RACE CAR DESIGN STANDARDS

(... or "Why should the kids have ALL the fun?")

The purpose of the Open Class race is to have a little fun. All adults are encouraged to build their own cars. The Open Class race will be held the same day as the Scouts' race. Any parent, guardian and sibling of a Cub Scout who is registered in Pack 4026 or Alumni and Den Chiefs may enter this race. Other community members may from time to time be invited by the Pack to participate.

- P-1. **Technical Standards:** The Technical Standards for the Cub Scout race (above) will be used in the Open Class race.
- P-2. **Entry Fee:** An entry fee is the cost of your car and participation.
- P-3. **Number of Entries:** One entry per person.
- P-4. **The Car:** You may NOT use your son's current car for this race.

P-5. **Weigh-In:** Cars will be inspected, weighed, and registered following the procedure outlined above.

P-6. **What Do The Winners Get?** Winners will be recognized with honor, glory and bragging rights!

VI. SPECIAL NOTES TO ALL CONCERNED

The Pinewood Derby is intended to be a parent and son activity, 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 their child. In all of 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 doesn't mean that you are a good person one time and not good another time. You can always be a good person, whether or not 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 really 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.