

Lake Trail Nation 2017 Official Pinewood Derby Rules

IMPORTANT: Only **Official Grand Prix Pinewood Derby Kit** "Cub Scout Derby" may be used to build your car. No **Pinocar Kits** will be permitted to race, although Pinocar weights may be added.

PARTICIPATION

1. The race is open to all Adventure Guides children. One car per person allowed.
2. The car must have been built during the current year (school year in which the derby is held).
3. Cars that have competed in previous derbies are not permitted.

LENGTH, WIDTH, AND CLEARANCE

4. The maximum overall width (including wheels and axles) shall not exceed 2 $\frac{3}{4}$ inches.
5. The minimum width between the wheels shall be 1 $\frac{3}{4}$ inches so the car will clear the center guide strip on the track.
6. The MINIMUM clearance between the bottom of the car and the track surface shall be $\frac{3}{8}$ inch so the car will clear the center guide strip of the track.
7. The maximum overall height, from the bottom of the wheels, shall not exceed 4 $\frac{7}{8}$ inches so the car will fit underneath the starting gate.
8. The maximum overall length shall not exceed 7 inches.
9. The wheel-base (distance between the front and rear axles) must be 4 $\frac{3}{8}$ inches as provided in the kit. The axle slot locations must be as provided in the kit. Axle slots may be redressed or re-cut if they are not true, but the 4 $\frac{3}{8}$ inch wheel base must be maintained.

TIP: *You may want to exceed the minimum clearance, just in case. Watch that weights added under the car don't reduce the clearance below the minimum.*

WEIGHT AND APPEARANCE

1. Weight shall not exceed 5 ounces.
2. The reading of our official scale shall be considered final.
3. No liquids or loose material of any kind are permitted in or on the car.
4. Details such as steering wheel, driver, spoiler, decals, painting and interior details are permissible as long as these details do not exceed the maximum length, width or weight specification.
5. Cars with wet paint will not be accepted.
6. Have some fun with the design. Here are a couple simple design ideas:
 - a. A block of wood decorated like a box of Good-n-Plenty's is unique and would require no cutting, perfect for our younger Guides.
 - b. Cut the block in the shape of a wedge – a simple and sleek look. Decorate your car with different colored thumbprints, stickers, decals, glitter, etc.
7. Car construction must be durable, at the finish line the cars are stopped with a barrier covered with foam. Cars need to be able to survive this "semi-crash".

TIP: *The car should weigh as close as possible to 5 ounces to insure it finishes the race. Add weights if necessary. Every 0.1 of an ounce matters.*

TIP: *The car should not be overly weighted on one end or another as it may jump the track much easier.*

WHEELS AND AXLES

1. Axles and wheels shall be only as provided in the Official Grand Prix Pinewood Derby Kit, that is, use the nails provided as axles.
2. No through-axles or solid axles will be permitted (typical of *Pinecar Kits*).
3. Axles may not be altered any way except for burr removal and polishing.
4. Wheels may be sanded slightly to smooth out molding imperfections in the tread area.
5. Beveling or tapering of the tread surface is prohibited.
6. Wheel bearings, washers, bushings, and hubcaps are prohibited.
7. The car shall not ride on any sort of springs.
8. The car must be free-wheeling, with no starting device or other type of propulsion.

LUBRICATION

1. Only graphite will be allowed for lubricating the wheels (available at any hobby shop).
2. Cars should be fully lubricated prior to inspection at final weigh-in and registration.
3. Graphite will be available at registration.

INSPECTION AND REGISTRATION

1. Each car must pass a technical inspection of the aforementioned rules before it can be registered.
2. The Inspection Committee shall disqualify cars that do not meet these aforementioned rules.
 - a. If the car does not pass inspection, the owner will be informed of the reason it did not pass (too long, too heavy, altered wheel base, or the like).
 - b. Cars that fail the initial inspection may be modified on the spot by the owner to pass inspection before the inspection registration closes.
3. To enter the race, cars must have passed inspection and be registered by the final inspection deadline.
4. If you can't make the registration date, have somebody else in your Circle register the car for you. We do not want disappointed kids (and adults) on the race day. Do not force the race committee to make a difficult decision. We are all losers if a child can't race. Our goal is to have fun.
5. No cars may be altered in any way after it has been registered.
6. This includes wheel/axle lubrication. Cars will not be lubricated at all during racing.
7. After passing inspection, no car shall be re-inspected unless repaired after damage in handling or in a race.

8. Any participant (including parents of participants) may appeal to the Race Committee for an interpretation of these rules. By majority vote, the Race Committee will be the final judge of these rules.
9. When the car is registered it will be given an identification number, which will be written on a sticker (about 1/2 inch round) that will be placed under the car.
10. After passing inspection, cars will be kept in a secure place at the Lakewood YMCA until race time.

TIP: Do not show up at the race with an unregistered car. It will not be permitted to race because all the heats are predetermined.

RACING RULES

1. An electronic timer system will determine first, second and third place finishers in the races.
2. Competition will consist of heat races to determine first, second and third place within each Circle.
3. The first place winners in each Circle progress to the Nation Finals, a final series of heats to determine first, second, and third place at the Nation level.
4. If a Circle has 10 or more racers, the circle may be divided equally into separate heats, i.e. Pony Express 1 and Pony Express 2.
 - a. This is up to the discretion of the race committee.
 - b. They will compete as separate racing groups, and be eligible for first, second and third place awards within their heats.
 - c. The winner of each heat will advance to the Nation Finals.
5. Nation finalists will not be divided into separate racing groups.

SCORING

1. We will follow what is called a PERFECT-N.
2. Each car in the circle will run once in each of our four lanes.
3. A car runs against a different combination of opponents in each heat.
4. ***Circles***
 - a. After all the races are completed in each Circle, the 1st 2nd and 3rd place finishers will be determined based on accumulative time for their four runs. The lowest time takes first place, and so on.
 - b. The possibility of two cars having the same accumulative time after four races is very unlikely. But if this happens the first car that wins 2 out of 3 races will be the winner. Racers will draw lane assignments for any runoff. The loser will then move down one place and bump the lower placing car(s) down to the next lower place(s).
6. ***Nation Finals***
 - a. These races will follow the same format above except we will run the cars a total of eight times, two times in each lane.

WILD CARDS

1. The 7 cars with the lowest average time in the Nation that did not finish in first place in their Circle will be the wild card entrants.

NATION FINALS

1. Only the official heat times will count.
2. We will then have 16 cars in the Nation Finals, 9 circle winners and 7 wild cards.
3. Any run-off heats to determine places do not count in the elapsed time.
4. The wild-card finalists are dependent on the timer working correctly. If there is a timer problem, then the wild-card finalists may be eliminated, and only the first place winners will advance to the nation finals.
5. If a car jumps the track, the race will be run again. If the same car jumps the track a second time, that car will automatically place last in that race (DNF with a time of 9.99 seconds).
6. If a car leaves its lane and interferes with another car, the race will be run again. If the same car leaves its lane a second time and interferes with another car, the race will be run again without the interfering car and it will automatically place last in that race (DNF with a time of 9.99 seconds).
7. If a car causes the finish line to malfunction by bouncing back under the finish line timer, the race will be run again.
8. If a car becomes damaged and can be repaired in a reasonable amount of time (a few minutes) the race will be run again. If not, the damaged car will automatically place last in that race (DNF with a time 9.99 seconds).
9. If the timing system malfunctions the race will be re-run.
10. We will provide some means to communicate who is racing in each of the predetermined races, either via charts or on-line computer screen projection devices.
11. Only race officials and designated 'car runner' may enter the track area. This rule will be strictly enforced.
12. If the electronic timing system malfunctions and cannot be repaired then we will revert to a point system.
 - a. To score the races 1 point for 1st place, 2 points for second place and so on.
 - b. The car with the lowest points after all the heats have run is the winner.
 - c. The car with the second least points will finish second and so on.
13. All decisions by the Race Committee are final.

REWARDS AND RECOGNITION

1. Trophies will be awarded to first, second and third places for each Circle and Nation finalists.
2. Each participant will receive a stand to proudly display his/her pinewood car.
3. Trophies will also be given out for the following eight titles:
 - 1) **Best Paint Job**

- 2) **Sportiest Looking**
 - 3) **Most Intimidating**
 - 4) **Best Use of Imagination**
 - 5) **Most Artistic**
 - 6) **Safest Driver**
 - 7) **Fastest Time**
 - 8) **People's Choice** – everyone (parents included) can vote for their favorite car
4. These forms of recognition may change from year to year if the Longhouse Council so desires.