

## **Cub Scout Pack 64 Pinewood Derby**



**When:** Saturday, January 10<sup>th</sup> (times for each rank on calendar)

**Where:** Oldsmar Community United Methodist Church

Yes it's that time of year again! It's time for the Pinewood Derby! This is always a fun and exciting event for all. With your guidance, the boys will learn how to take a block of pine and turn it into a real pinewood racer.

On the Friday night prior to race day, we will have a "Test & Tune Night". Here contestants can make test runs with their car to determine if any adjustments are necessary. The official race scale will also be available to make sure your car conforms to the race specifications.

Please review all of the following material to help make race day run smoothly.

### **The Prime Directive**

- The boys and adult should make the car together as a project! It is not the intent that the parent show the Scout the garage door then walk away; nor is it the intent that the boy play video games while the adult cuts and sands. Parents should shape with the power tools and then direct the rest of the action while showing the boy each step in building a car. Please let your son know the fun of designing and building his own car.
- Have fun! After all, this is what it is all about.
- Know the rules/specifications. You don't want to fail inspection and have to make last minute changes on race day!
- Safety first. Lets not lose any fingers.

## **Specifications**

- **Width:** Shall not exceed 2-3/4 inches.
- **Length:** Shall not exceed 7 inches.
- **Weight:** Shall not exceed 5 ounces.  
No loose materials of any kind are permitted in the car. The car may be hollowed out and built up to the maximum weight by the addition of wood or metal ONLY, provided it is securely built into or attached onto the body.
- **Axles:** ONLY the axle nails provided with the kit may be used. NO EXCEPTIONS!
- **Wheels:** ONLY the wheels provided with the kit may be used. NO EXCEPTIONS!
- **Body:** ONLY the body provided with the kit may be used. NO EXCEPTIONS!
- **Wheel Bearings:** Washers and bushings are prohibited.
- **Springing:** The car shall not ride on any kind of springs.
- **Details:** Steering wheel, driver, decals, painting, and interior detail are permitted as long as they do not exceed the maximum width, length, and weight restrictions. DO NOT PUT NUMBERS ON THE CAR! Official race numbers will be assigned on race day.
- **Attachments:** The car must be free-wheeling with no starting devices.
- **Lubrication:** ONLY powdered graphite or silicone may be used to lubricate axles. Other lubricants can damage the track. NO EXCEPTIONS!
- **Inspection:** Each car must pass inspection by the Official Inspection Committee before it may compete. The inspectors have the right to disqualify cars that do not meet these specifications. On race day, once your car has passed inspection, it will be kept in a special holding area until it is your time to race. This is to make sure that no post inspection modifications are made. However, if your car breaks during a run, you will be allowed to make repairs.

## **Building Instructions**

Building instructions and tips are included in your Pinewood Derby Car Kit. Below are some additional tips from the Cub Scout Leader How-To book.

- If your design calls for cutting away much of the block, use a saw first, then a jackknife.
- Paint body parts before assembling them to avoid getting paint on axles.

- Remove burrs on the nail axles before adding wheels, using sandpaper or emery paper.
- If there is a mold seam on the wheels, sand them very lightly. The wheels can break if too heavily sanded.
- Use white glue or model airplane cement to hold nail axle in the body. Measure center distance between axles before attaching.
- Lubricate axles with powdered graphite or silicone only. Lubricating oil will slow wheel spin and dripping oil will foul the racetrack.
- Fishing sinkers, coins, or other weights may be inserted in the body to add weight, but the total weight of the car must not exceed 5 ounces.
- The cars fit over a raised slat on the racetrack (see Diagram A below). Be certain that there are no obstacles under the car which will cause it to drag.
- The electronic finish line has an overhead sensor which the car must pass under. The clearance will accommodate the car with it's wheels in place leaving a headroom of about a ½ inch. Be certain that there is no obstacle on top of the car which will prevent it from clearing the sensor.
- The cars are positioned and held in place with a small wooden dowel which is dropped to start the race. Be certain that the front of your car is wide enough to be held in place by the dowel (see Diagram B).



Diagram A.

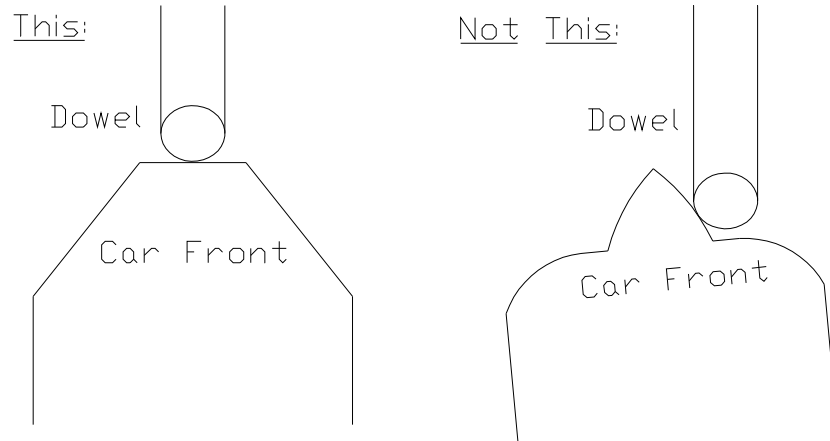


Diagram B.

### **On Race Day-Be Prepared**

- Have extra axles and wheels on hand. You never know when your car may be the one dropped by your son as he shows off his handiwork.
- Have a derby tool kit handy. It should include superglue, sandpaper, a drill, extra screws for your weights, extra weights, a small screwdriver. You may not use it, but it will make you the most popular person at the event.
- Transport your car in a shoebox. Dropped cars are unfortunately a too common experience.
- Explain to your son that running the car along the floor prior to the race will cause it to lose!
- To limit the chaos and prevent damage to the race equipment, race officials (not the boys) will be placing the cars on the track and dropping the starting gate to initiate the race. The boys will have a trackside front row seat to be part of the action.