

# PINE WOOD DERBY

## **Planning and Preparation:**

This is a complex activity that requires planning and preparation. Start working this 1 to 2 months out. Make sure the scouts and families have the car kits at least a month out. Giving out prior to Christmas break for races at the end of January gives the families 6 weeks to build the car. Talk to parents and other scout leaders and chartered organization leaders for help. You will need it, and it is often a fun activity for them.

## **Sportsmanship:**

This is meant to be a fun activity. There will be winners and there will be losers. Prepare the scouts by talking about sportsmanship during the month preceding the event. Prepare trophies for the winners. Depending on the size of your pack and budget, you should have awards for 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> in each age group, and overall. Trophy shops can custom make trophies, but they generally cost a good bit and takes a couple weeks. The scout shop has decent generic trophies for pinewood derby. A willing parent with woodworking tools can also make trophies, but you will need to give them at least a month to do this. Certificates can be purchased or printed cheaply. Have an award certificate where you fill in the details for the judges to create things like, 'Cheesiest Car' –handed to a car made to look like a clock of cheese. Be prepared with enough certificates to allow each child to be recognized for his or her effort in car creation.

## **Scouts Making the Cars:**

The scout should make the car.

The younger scout will require some help from the parent. Parents may need guiding

The basic construction steps are:

1. Select or come up with a design. (Look at the Internet for ideas!)
2. Make the initial cut of the block.
3. (optional) add on additional pieces as needed
4. Initial weight check. Put all blocks, wheels, and axles on scale to see if it is close to 5 oz.
5. Sand it smooth. (Removes a little weight)
6. Paint and finish. (Adds a little weight)
7. Add the wheels. (Try to make sure to add the straight)
8. Add/remove weight to get it to 5 oz. (I take it to 4.9, and bring .1 oz weight to add, just in case the official scale is different than my own scale)
9. Graphite the wheels and axles.

## **Parents Helping with the Cars**

Some parents take over the car. Encourage parents to build their own car to help prevent this. When checking in the for the race, ask the scout, "Did you make this car?" then watch them closely to determine how much the parent 'helped'

## **CAR BUILDING HELP:**

The scout shop runs events to cut the cars. This helps families that do not have the tools. Also, consider setting up a meeting where an adult brings a small band saw 2 to 3 weeks prior to the race. The saw must be operated by a PARENT (or leader). During the month prior to the race, talk to the parents and scouts about how to build a cars.

## **RULES:**

Establish the rules for the races 2 months prior and publish them to the pack and the parents. You pack may already have rules from previous races. It is often easiest to simply re-use these rules. Things to think about: If the district or

council will have joint races, consider adopting their rules, so that your scouts can participate in those races, if they choose. After the race, you and your leaders should review the race and consider modifying the rules, if needed.

**Getting Help:**

There are many things to do on race day. Invite people from the chartered organization to help with the various aspects. Another source for help is the troop. Ask the Senior patrol leader (coordinate with the scout master) to have several scouts on hand as helpers.

Here are some areas where they can help: Setup/Tear-down of the room. Setup/Tear-down of the track. Food preparation and clean-up. Race Judges. Car Judges. Car Handlers. Pitt helpers. Other activity leaders.

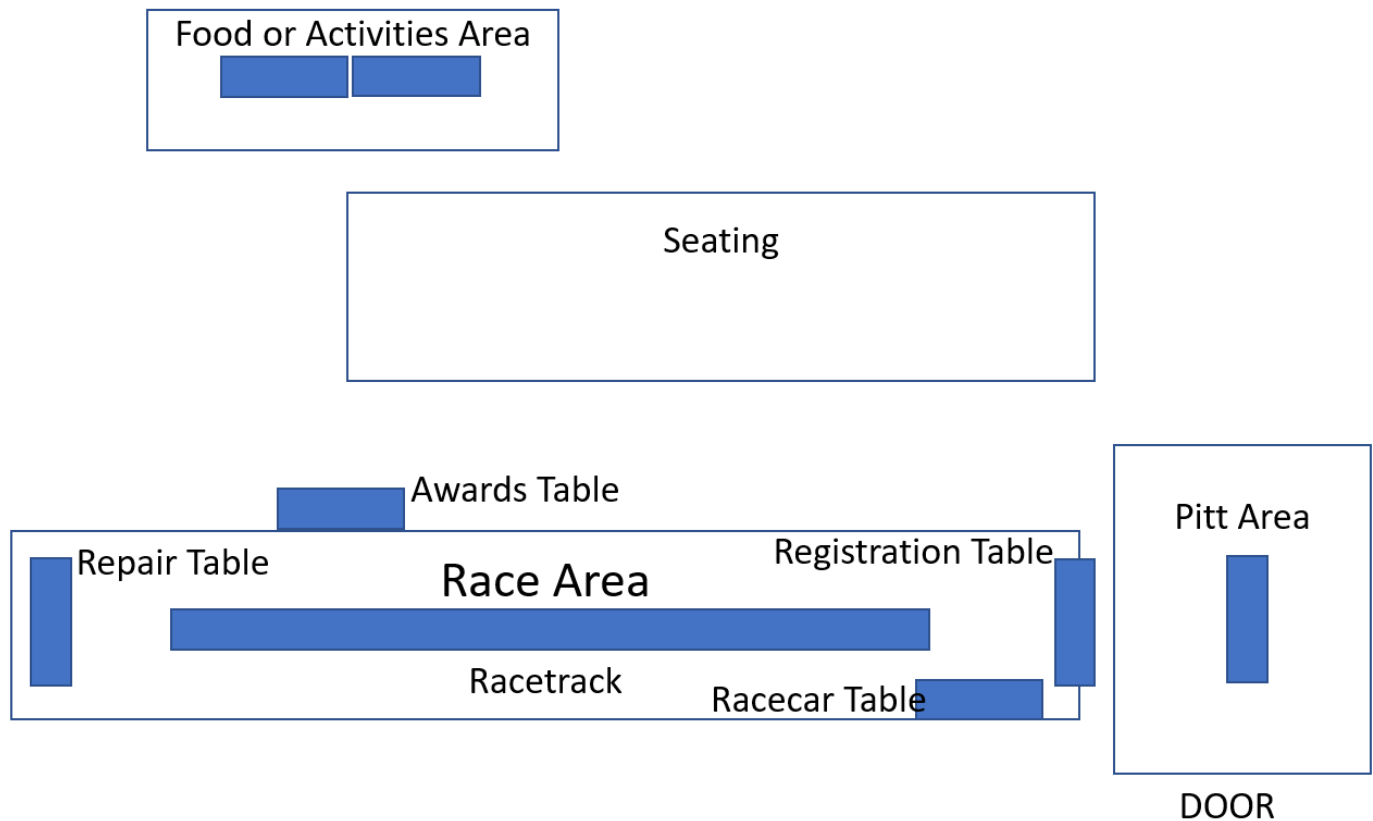
**Other activities:**

Consider if you want other activities available to the pack. Races are fun and exciting, but the fun is limited to the group actively racing. Most of the others will be bored. Consider providing a race related activity. An example is a workshop where they scouts can make a car stand from pre-prepared kits. For Bears to earn the builder, they need to make something fun AND something useful. The car is fun, a stand is useful.

# On Race Day

Arrive EARLY to set things up. Most tracks take 20 minutes to 30 minutes to set up. Sometimes festive room decorations make race day more exciting, but these take time to set up.

## BASIC PINEWOOD DERBY SETUP



**Pitt Area:** Graphite is hard to clean up! Put a tarp or sheet on the ground and tape it down with painter's tape (blue or green) This tape is gentle and will not damage the floor. It also holds the cloth down. Put a worktable (or two) in the middle of the area. Provide tools for the families to use. A power drill, a few hammers. A Vice (that can be clamped to the table) A couple pairs of needle nose pliers. Provide supplies: two or more tubes of graphite. Weights to add to the cars. Glue. Fast acting crazy or super glue generally works best. Hot glue does not usually hold. Provide supervision. 1 or 2 adults at the Pitt table is required because of the power drill.

**Registration Table:** This is where the scouts register their cars for the races. You need a digital scale to weigh the cars, and measuring devices to make sure the cars are sized for your track. You will need small stickers to write numbers and place them on the car. You will need a registry list that matches the car number to the scout and identifies the age group. Some packs have different lists for each age group, and different colored stickers (or different color sharpies for writing) 2 Judges. They should ask the scout, "Is this car ready to race?" "Did you make this car?" and "When did you make it?" They must weigh the car, and make sure it fits the track. Then write the scout's name on the registry and place a number on the car. Then place the car on the racecar table.

**Racecar Table:** This is where registered cars are kept.

**Award Table:** This is where you place the trophies for all to see and admire.

**Repair Table:** This is where scout helpers (from the troop) repair/replace wheels that have fallen off.

**Food or Activities Area:** These are tables to hold food or supplies for other activities if you have other activities.

**Crowd Handler:** To keep the crowd engaged, it is best to have an energetic crowd handler. This person should be prepared to tell jokes, stories, and generally talk to the crowd and keep them engaged. If they can be mic'ed, this will help with crowd control. Scouts who are not racing can get bored easily, so keep the energy high.

**Recorder:** have a person dedicated to recording race results. If possible, set up a spread sheet and put it on a laptop and allow the person to record that way. While this can represent some work up front, it will make tallying up the scores faster and more accurate on race day. If you can not do a spreadsheet, as a minimum, prepare tables for data entry the match your race system and the registration.

**Car Judges:** The individual awards (certificates) require that a person or two look at each car and generate the unique awards. These people should be impartial (no kids in the pack) This is ideal for the COR, or other individuals from the Chartered Organization. They should examine the cards after they are registered. They can judge cars in groups that are not racing,

**Track Operators:** Consider putting a scout helper at the head of the track to verify that the cars have been placed correctly on the track and to start each race. Also put two or three scout helpers at the end of the track to retrieve the cars from the track. Have a dedicated car repair person (scout helper). Have a dedicated person (scout helper) at the racecar table to pull cars from the table.

### **Random Thoughts:**

Pinewood Derby tracks represent a significant investment for the pack. When setting up and tearing down, you or your team must take care to protect the track. I often place a rope barrier immediately around the track to prevent cubs and scouts from jumping over the track. I often place a second rope barrier around the race area and control access to this area. Only track personnel, judges, and active racers are permitted in this area. This provides a second layer of protection for the track and the race activities. When a cub is called to race, the scout is permitted in the area, and must retrieve his or her car from the racecar table (handed by the helper) the cub then places the car on the track in the correct lane, and then steps to the side to watch the race. After the race, the cub retrieves the car from the track operator and brings it back to the head of the track to place on the next lane. When the cub has completed the races, the scout returns the car to the helper at the racecar table and exits the race area. This is one way to do it. It is not the only way, but it works.

Crowd Control is a big issue for this activity. Cubs who are not racing get bored. Keep things moving and have an entertaining crowd handler or provide additional activities.

Cheating. The best way to prevent cheating is to keep tight control of the cars after registration. Aside from placing on the track (done by the cub), only allow designated judges and track operators to touch the car and keep it in the race area at all times. I once had a parent sneak in and grab his son's car to add graphite during the races. My judges noticed this, and I was forced to disqualify the car from all further races. Prevention is better than a judgement like this.

**HAVE FUN!** This is one of the funnest activities that the cubs do all year and is often remembered by them their whole lives. Make sure it is fun for all. (including yourself)