

PACK 1116 Pinewood Pearls of Wisdom
Time honored tips handed down from Generations of Pinewood Gurus

First Tip:

It's supposed to be fun ! So don't over reach - just enjoy the time and let the kid make mistakes. Guide him, don't ride him.

Second Tip:

Have a design in mind that you can execute. My son has a lot of ideas that I have no earthly idea of how to help him build. Keep it simple if you want to keep it fun. If you have the skills go large and design away. Remember the kid is supposed to make the car so show him then turn the job over and see what he does with it.

Third Tip:

Get an extra kit, they are not that expensive and if you break or lose something get it from the other kit. Wheels sometimes have a defect or an axle goes missing. This also allows you to show your son how to do something on the extra wood and then have him try it on his "real racer". You can only race one and enter one so if you have two you have to choose which one to enter. There is always next year so if the car turns out less than great it was time spent together and learning that is the whole exercise here.

Fourth Tip:

Sometimes its not the woodwork ! The car that stands out to me was the "Spongebob" car that was simple to build and the kid was totally excited to have painted it. There was minimal wood work just a cool paint job and a great set of wheels. The car placed high in the standings and the kid was on cloud nine and dad was looking realhappy/relieved too.

Previous pack winners have used only what was in the box. No special wheels or axles – just raw material and a dad and a boy who did the best they could with the skills they had. Turned out a winner and a cool looking car so don't stress and get nervous.

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The 2005-2006 Pinewood Tip master is jp_williams@verizon.net and can supply some extra ideas or emergency parts like a wheel or axle if needed. Contact Jim with any question and he will help if he can.

Some links for tips and ideas:
<http://www.rahul.net/mcgrew/derby/>

<http://members.aol.com/randywoo/pine/links.htm#links>
for more google is a great resource

Here are some cut and paste tips from the aol site listed above (remember – don't stress about these – take these as additional fun things to do with your son if you have time).

Friction Is Your Enemy

1. Debur the wheels. Take off the flashing and seam that was produced when the wheel was molded with a 600 grit or better sandpaper. Inside as well as out. Sand any bumps off the wheel the sandpaper. Metal polish will restore the gloss. Be careful not to break any rules your race has regarding wheel modification. (Narrower wheels have less friction and are better, but often disallowed). Don't sand too much or you'll create a flat spot. Sand by hand not with the drill. Heat from the high speed of a drill will damage/melt the plastic wheel.
2. Polish the axles. First with a 400 grit wet/dry emery paper if you have a really bad spot. Then a 600/800 grit, and then a jewelers rouge. Finish off with a chrome/metal polish. I use a drill on slow speed and cut the emery paper into strips and just add a few drops of water to get a wet sand. Auto stores have sheets of paper, one sheet lasted me thru three seasons.
3. Have only three wheels touching the track. Raise a front one slightly. There is less friction with 3 wheels rolling than 4. This is important and will require that you are 100% sure the car goes straight with the remaining three wheels.
4. The head of the axle should be tapered about 15 degrees so it rubs against the wheel less. The head is a mushroom shape and it stops the wheel from falling off. If you think about it the more metal that contacts the hub of the wheel the more friction. So if you can use a small jeweler's file just shave a little of so the axle shaft and a minimal about of the mushroom head are all that actually touch the plastic wheel.
5. Wax the wheels with furniture polish. Make sure the polish does not contain a solvent of any sort.

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Lube Jobs

1. Use graphite only. Oil damages the paint and collects dust. I'm told that the graphite works better than the new white teflon. Oil is against the rules too.
2. Break in the wheels by spinning them with lots of graphite. Spin them at slow speed using a drill remember graphite stains so plan for the spray of messy graphite. Put the wheel into a shoe box so the graphite spray stays contained. Angle the drill downwards and turn it on, apply graphite to the inside of the wheel and let gravity and centrifugal force push it on through. Running the wheels for a good amount of time (hour) as a pair helps seat them and shows any vibration problems you might have. Keep the wheels and axles paired up from now on. Keep them in a zip loc and you can't have too much graphite unless mom says so.
3. Right before check-in, fill the wheels wells with graphite and cover with stickers like a hub cap. You can paint the 1 inch stickers in a contrasting color. It looks great! **No comment on this one I am not sure I endorse it due to probability it will cause friction if not done right !!**
4. Put a small drop of white glue where the axle goes into the car body and put powdered graphite on it there. That causes less friction if the wheel should rub against the car body. This keeps the wheel on the axle away from the wood body remember this is not a precision made device and your skills are used to try to improve it beyond what others achieve.
5. Other than the good polishing of the axles, dump the axles and wheels in a ziplock bag with some graphite and shake them for a few days prior to the race. That way the wheel and the axles are as slick as can be.

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It's Time To Go Straight

1. Put the axle in at a downward (5-10 degrees) angle. This provides two benefits. The first is the only the inside edge of the wheel is in contact with the track. This seems to make the car go straighter with less wobble. The second benefit is that the wheel rides to the outside of the axle and doesn't come in contact with the body. This tip is for experts only. First timers have trouble getting this right. If you have to email me to ask about it, you shouldn't do it. This is instead of the drop of glue in tip #4 above.
2. Axles must be in straight front to back. That is square to the body. True the axles, don't trust the slots! If you have one, use a drill press to ensure all axles are straight. One of the front and two of the back should be measured to be the same height. Using a metal rule to align is a good idea or a quality wood rule. This is where you help yourself the most in the race so spend some time here.
3. After pressing in the axles, test the car for crooked wheels...roll it on the floor. If the wheels are on straight, the car should roll 8-10 feet in a fairly straight line. Should the car turn left or right, you need to tinker with the axle placement without removing them from the car body, until it rolls straight.
4. Do not put the axles in at the top of the groove. Put them in at the middle. This lifts the car off the track a bit more and reduces the chance of rubbing on the center strip.
5. Glue the axles in place. Nothing is worse than having the wheel fall off as you cross the finish line.
6. Once you match a wheel and axle together with graphite, keep them together. They wear into each other as a matched set.

Weigh In

1. Get the weight as close to the 5 ounce limit as possible. Add the last little bit of weight with lead tape from the golf shop. This can be trimmed with scissors at the last minute. Remember, the official scale may not weigh the same as yours. We will have weight at the build table if needed. We can also drill some lead out if you are too heavy. Just come a little early to allow us to help you.
2. Everyone has an opinion on where to put the weight. My belief is that the weight needs to be predominantly in the rear so that gravity can act upon the weight further up the incline and for a longer period of time A car with more weight to the rear generally grabs more speed down the slope. Many suggest having the center of gravity at 1 to 1 1/2 inches in front of the rear wheels. But be careful not to put too much in the rear or you'll pop a wheelie. Putting too much of the weight in the rear can cause the front wheel to shimmy and not track straight.

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3. What kind of weight? I think the melted lead is dangerous and unnecessary. Tubular weights can be sunk in the sides; flat weights, like those sold at hobby & council stores can be attached to the car bottom if it is carved in a bit. Incremental weights (with pre-marked grooves) are easier to snap off into the size you need. Some folks just use BB's, nuts & bolts, etc., but these must be glued so that they can not move. No movable weights or mercury are allowed. Some people drill a hole in the rear or side to side and fill it then putty over the hole. Get the weight close and think about the extra glue/putty weight.
4. We use the round weights found at the hobby shops and craft stores. This allows us to stick the weights out the back of the car. We paint them and tell everyone that they are jet engines or tail pipes. What they really do is allow us to get the weights as far back as possible.
5. Keep the weight low on the car and in the center (Left/Right of the car). Put the weight just in front or behind the rear wheels for less wheel chatter.

The Finish

1. Buy a gloss finish for the car. Its worth it. After all that work, this is the final touch. The more coats that you put on...the shinier your car will be. Be sure the paint is dry before putting on the gloss coat. Some gloss products may be incompatible with the paint.
2. Sand in the direction of the grain when smoothing and against the grain when shaping.
3. Use a sandable primer or wood sealer. White is for light colors and grey for dark colors. This will save you many coats if you seal it first then paint.
4. Water based paints dry quicker (1 hour) than oil based paints (24 Hours).
5. Children LOVE decals. The more.....the better.

Race Day-Be Prepared

1. 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. We have these too at the build table.
2. 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. We will have this just keep the car safe and in foam or towel to ensure the wheels don't move.
3. Transport your car in a shoebox with foam or towel. Dropped cars are unfortunately a too common experience.

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4. Add LOTS of graphite right before check in. Graphite stains, do not get it wet that sets the stain. Brush or vacuum it, do not get it wet. Mom will not be happy with a stain on the table cloth when you want to show off the car, just ask my son, Paul.
5. Explain to your son that running the car along the floor prior to the race will cause it to lose! Hardest thing to do, each kid wants to see his car go and will roll it all over if you let them.