

# PACK 13

## 2011 PINEWOOD DERBY

Please read these Rules and Instructions before building your car.



**Weigh-In: March 14 (Wednesday) 6:30pm-8pm**

**Race: March 17 (Saturday) 10:00am - 2:00pm**



The Pinewood Derby is open to all Cub Scouts who have paid their annual pack registration fee for the 2011-2012 scouting year. Adults and siblings wishing to enter a car may do so under the “siblings” division.

The cars should be built by the Cub Scouts with some adult guidance. Any technical assistance should be fully explained to the Cub Scout so that he can use that knowledge on future projects.

In order to encourage resourcefulness and innovation by our Scouts, we are providing the following specifications to establish a common starting point and framework for all our Scouts to work within while building their cars.

These guidelines will comprise the sole weigh-in inspection criteria which must be met in order for the scout’s car to participate in the derby. As the race inspectors, we will strive to strike a balance between conformity to these rules and innovation on the part of the Scout. However, any decision of the inspectors will be final.

Please have your Scout do his best to meet these specifications so that there are no unpleasant surprises come weigh-in night.

### Note:

This is a Scouting event, so all participants, (and all Scouting Leaders) are expected to be in their full scout uniform.



*(This video is available for den meetings. See your den leader for details)*

## HELP

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**The Pinewood Derby takes a great deal of effort and teamwork.**

**We need your help with the following teams in order to pull off a successful event.**

The Pack leaders can't do this one alone, so please join a team. Most teams need 4-5 people (& you can be on more than 1 team). No experience necessary! 😊

- **Weigh-in Team:** Helps at weigh-in night. Ensures cars are race-able & meet the rules. Weighs & collects cars. Helps scouts with repairs to cars/getting to proper weight. Takes photos of each Scout & his car.
- **Awards Team (2-3 people):** Judges awards on weigh-in night. Prepares awards/certificates between Weigh-in Night & Race Day. Distributes awards on event day.
- **Setup/Teardown Team:** Sets up track/timing system on morning of Race Day. Sets up viewing area. Maintains track during races. Tears down in the afternoon.
- **Race Execution/Pit-Crew:** On Race Day, manages scouts and cars. Places cars on track and starts each race. Works crowd control. Works the timing system/maintains times. Repairs cars, as needed.
- **Refreshments Team:** Prior to race day, secures refreshment donations. On race day, the team works the refreshment booth and helps collect the donated items (usually, this involves running to pizza shops)

If you are interested in helping out, please let Mr. Gillogly, Mr. Wheeler or any other adult leader know.

## IMPORTANT DATES/INFO

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### Weigh-In Night

**When:** March 14 (Wednesday) 6:30pm-8pm

**Where:** Scout Room (Orthodox Congregational Church)

- This is a non-uniformed event.
- You must register your car at weigh-in night. If you cannot make it, please make arrangements for someone else to bring the car to the weigh-in.
- Once you register your car, you are free to go.
- A word of advice: If everyone arrives at 6:30pm, there will be a line. Spread things out, and it will be a much easier process.
- Cars are weighed and turned in. Scouts will not see their cars till race day, so please have any cars in race condition.
- There will be limited tools & assistance available to help with any car issues at race night.

### Race Day

**When:** March 17 (Saturday) 10:00am - 2:00pm

**Where:** Robinson School Cafeteria (where we have the pack meetings)

- This is a uniformed event.
- Race times are detail in this document
  - You do not need to stay for the entire event, but please arrive 15 minutes prior to your race time
  - Those finishing in the top 3 for each rank advance to the Pack Finals, so plan accordingly.
  - After the "official races", racers will get to race during their time block
- Show good Scout spirit & cheer for everyone!
- Have Fun!!!

## CAR SPECIFICATIONS:

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*These guidelines would not be necessary if each parent would simply let their boy build his own car. Hmmm!*

**Original Materials:** The car must be made from the materials contained in the Official Cub Scout Pinewood Derby Kit, as provided to each scout by the pack, including the wood block, four plastic wheels and four nail axles. No substitutions to these three basic components or the addition of any other mechanical equipment will be allowed.

**New Cars only:** All cars must be made from kit in the same (Cub Scout) year as the race.

**Identify:** Write the racer's name and the year clearly on the car to be raced. If not done prior to weigh-in, the inspectors will request that you do so prior to the official weigh-in. ID's on the bottom of the car are acceptable.

**Weight - Not over 5 Ounces.**

We recommend that you check the weight of your block, wheels & axles before starting as the nonstandard nature of wood will result in some blocks being heavier out of the box than others.

**Dimensions: Width – 2-3/4" (max); Length - 7" (max).**

Your entire car must fit in a rectangle of these dimensions to ensure the unobstructed travel of all cars on the track.

**Width between each pair of wheels - 1-3/4".**

This is to ensure that the wheels will span the width of the track's lane strips.

**Distance between front and back axles – 4-3/8".**

The pre-cut axle slots are already this distance apart. The wheelbase of the car may not be modified, it must be the same as the official kit

**Bottom clearance between car and track - 3/8".**

This is an important specification as it ensures free travel along the track (We have had cars bottom out on race day, making for sad scouts). Please keep this in mind when adding weights, etc. to the bottom of the car. We have had cars bottom out on race day, and that doesn't make for a good race.

**Free-wheeling:** The car must be free-wheeling with no starting and or acceleration devices. The car shall not ride on any type of springs.

**Original wheel shape and design** must be maintained. Sanding or filing of slight manufacturing imperfections is allowed but changing the original shape or design of the wheels is not permitted.

**Original axle shape and design** must be maintained.

Only the axles (nails or the "new" BSA axle kits) provided in the kit may be used. Chroming, or any other type of special technical process, may not be used to apply a smooth finish to the nail or axle kits. Axle spacing of 4 3/8" inches must be maintained on all cars.

**Lubricant:** Only dry lubricant (i.e., graphic or similar) is permitted.

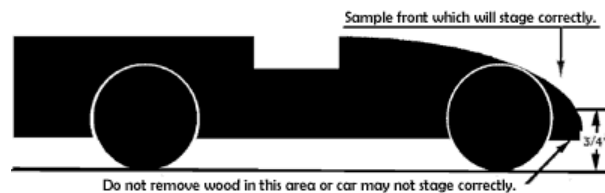
**Details,** such as a steering wheel and driver are permissible as long as these details do not exceed the maximum length, width and weight specifications.

**Staging:** Cars shall have a leading edge which is flat and parallel with the axles.

The leading edge should be between 0.5 (1/2) and 0.75 (3/4) inches above the track. Cars which "ride-up" on the staging pegs may be run backwards, or disqualified, at the judges discretion. An electronic finish line will be used, therefore, it is recommended that extreme needle-nose designs be avoided

No object can stick out beyond the front center of the car.

In fact, based on the pack's race timing system, such objects may prove disadvantageous both to the offending car and every other car that races against it.



**Inspection:** Each car must pass inspection by the official inspection committee before it may compete.

If a car does not pass inspection, the owner will be informed of the reason for failure, and will be given time within the official weigh-in time period to make the adjustment.

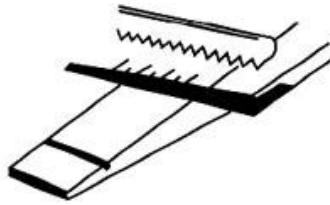
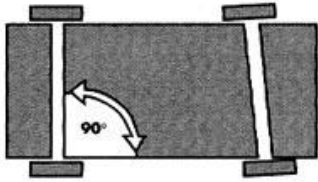
After final approval, cars will not be re-inspected unless they are damaged in handling or in a race.

## BUILDING SUGGESTIONS

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**AXLE SLOTS:** Check the axle grooves to ensure that each is at a perfect 90-degree angle to the car body. A car with untrue axles tends to steer to one side or the other, causing it to rub up against the side of the lane strip, slowing it down. You can check the groove angles by using a square, a protractor, or even a piece of paper.

Lay square on block to check for squareness and alignment of slot. Use two hacksaw blades side by side to redress the slots. Use the edge of the square as a guide.



**NOTE:** If the car design you chose has a narrow body, make sure the area where the axles are inserted into the body remains 1-3/4" wide, or wheels will not fit over the guide strips of the track.

**WEIGHTS:** Weights can be (and should be) added to cars to get them as close to the weight limit (see specifications) as possible. You may add weights anywhere on the car you would like, and can be made from anything (coins, washers). Please be sure, however, to make sure the bottom and side clearances are within the car specs. If a car is built with weights that, say make the car rub on the bottom of the track, it is very hard to fix.

**PAINTING** Apply several coats of sanding sealer; then sand entire car with a fine-grade sandpaper. Give model at least two coats of fast drying paint, in your choice of color. When paint is completely dry sand with fine sandpaper, apply a final coat of paint and allow to dry thoroughly.

**TIP:** Leave the area that the wheel will touch (i.e., near the axles) unpainted. Use masking tape to before painting

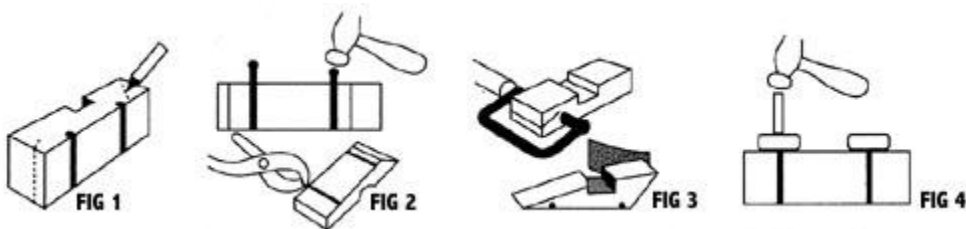
**TO FINISH,** rub entire car with a rubbing compound. Details such as windshield, driver, racing numbers, etc., should be added now. For a super finish apply a coat of auto wax and rub to a high gloss.

**WHEEL ASSEMBLY:** Use the original wheels and axles that came with the kit. Use car when assembling them. A small hammer or pair of pliers may be needed to

### TIPS

- The wheels and axles that come from the kit have mold marks on them, which can slow the car. Use a light sandpaper on the wheels and a small file on the axles to remove any burrs. Your car will move much faster!
- You should make sure that the axles are secure in the car. If you use glue, be very careful around the wheels. It is very easy to glue the wheel to the car.

**LUBRICATE** Pre-lubricate axles and wheels using, dry powdered lubricant (i.e., graphite). Do not use regular oil or silicone spray, since it may soften the plastic. Slide wheels over axles, then gently tap them into the car body grooves with a 1/4" dowel or similar object to within 1/32" of car body. (See Figure 4). Make sure wheels turn freely.



## WEIGH-IN

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The Weigh-In will be held on **Wednesday, March 14<sup>th</sup>** from 6:30p to 8:00pm in the Scout Room at the Orthodox Congregational Church. All Scouts must have their cars weighed and inspected during this session.

Once a car has been accepted by the Derby Committee, it CANNOT be taken home or worked on again until after the derby. Cars will be care for by the race team till race day.

No un-weighed cars will be allowed to participate in the derby and no cars will be weighed in on race day. If you can not make the weigh-in, call your Den Leader or have someone else bring it to the weigh-in for you.

A limited collection of tools, hot glue and extra weights will be available at the weigh-in for last minute adjustments. However, we recommend that you check the weight of your car in advance to avoid major surgery under primitive conditions during the weigh-in. We will have a scale available at the den meetings the week prior to the weigh-in for test purposes. You can also take your car to the post office, or your office mail room. Remember that these preliminary weights are strictly that and that the only weight that matters is the one that appears on the scale during the weigh-in.

## THE RACE SCHEDULE

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The Derby will be held on **Saturday, March 17<sup>th</sup>** from 10:00a until 2:00p at the Robinson School Cafeteria. The Scouts will be racing by rank according to the schedule shown below and food (doughnuts, juice, pizza and drinks) will be available to purchase for a nominal sum. When not racing, the boys are invited to view the other cars, and cast their own votes for their favorites –

Webelos II	10:00a – 10:30a
Webelos I	10:30a – 11:00a
Bears	11:00a – 11:30a
Wolves	11:30a – 12:00p
Tigers	12:00a – 12:30p
Lunch Break	12:30a – 1:00p (refreshments available for purchase)
Adult/Sibling/Den Chief	1:00p – 1:30p
Finals	1:30p – 2:00p
Cleanup	2:00p – 2:30p

## **RACE FORMAT**

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Each Scout will officially run his car four times, once per lane, to determine their official cumulative time and position within their rank. The top three cars in each rank will advance to the pack-wide finals to be run at the FINALS!

After the official races are completed for each rank, the Scouts will be allowed to informally race their cars until the end of their rank's time slot. Adults & Siblings are invited to race their cars at this time as well. We strongly recommend that the cars that are advancing to the finals be set aside to avoid damage to the cars prior to the finals. In any event, in order for the top three cars to participate in the finals, they must be returned to the finalist staging area and not handled or altered without the express permission of the derby committee. Permission will only be granted to make minor repairs to cars damaged during the course of racing.

During the finals, the top three cars from each rank will again run four times and the four top cars will be awarded pack honors. Those four cars will also be invited to a Council-wide Derby race to be held in April.

Please try to convey to your scout, that this race is not about winning, but is about fun & doing your best. Not everyone can get into the final four, but if you do your best, maybe you will.

## **GOOD SPORTSMANSHIP**

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After each race, the Scouts should thank their fellow competitors and shake their hands. This is good sportsmanship and the Scouting way. This race is for fun.

## **RACE OFFICIALS**

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We would like 3 adult volunteers, not related to the Scouts racing at the time, to support the racing activities by helping to man the starting gate and finish line and to assist the Scouts in transporting their cars from the staging area to the starting gate. Please contact Cubmaster Paul Wheeler at 508-339-0822

## AWARDS

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We would like some volunteers to help with the Vehicle Awards. He would like a few volunteers to help at the end of weigh-in night at 8:00pm to do the initial judging of the cars and prepare the awards. (There will be additional awards on race day based on the Scouts' voting, but this method should reduce race day confusion). Please contact any adult leader to help out in this area.

As the boys work on their designs, it may inspire them to know about some of the award categories in prior years:

Best Paint Job	Most original Design	Most Imaginative
Most Unusual	Most Decals	Most Futuristic
Best Driver in a Car	Best Vehicle not a Car	Most Creative Use of Materials
Shiniest Paint Job	Sportiest Looking	Most Aerodynamic
Funniest	Most Realistic	Most Patriotic
Best Design	Most Artistic	Most Colorful
Best Workmanship	Best Detail	Fastest Looking
Strangest Shape	Best Wedge Shape	Most Creative
Best of Show	and more...	

## FOOD/CONCESSIONS

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During the race, we will have juice and snacks, and later drinks and pizza, available for purchase at a nominal price. We would like 2-3 parents whose boys have finished racing to help at the food table during the next den's race. This will keep everyone fed and happy throughout the day, and certainly adds to the festive atmosphere.

## FINAL THOUGHTS

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Please remember that this event is for the benefit of our Scouts. It should be fun and encourage them to develop and practice many of Cub Scout Core Values including cooperation, resourcefulness, perseverance and resourcefulness. We encourage parents and guardians to supervise and assist when necessary. However, please resist taking over this project<sup>1</sup> and stealing an opportunity for you Scout to grow, learn and succeed. If you do, you will be amazed at what your scout can accomplish and, more importantly, how proud he will be of his car. Remember to have fun and enjoy your time together for this is what your boy will remember when they are your age!

The "Dear Abby" letter on the next page was written in 2002, and is a valuable reminder each year. Some of our Scout parents have access to tools and materials not available to everyone – that's fine, as long as it remains a parent/son endeavor, with learning and fun the central goals.

<sup>1</sup> Please refer to the movie "Down and Derby" for further details on the dangers of taking over your son's Derby car.....

## Published letter by Dear Abby

April 19, 2002

Dear Abby,

Recently my son entered a derby car race at his Cub Scout meeting. He left the house proud of the derby car he fashioned from a block of wood. My husband had shown him how to use the proper tools, to sand and paint the car - but it was our son's design.

When my son and husband arrived at the racetrack, it was obvious many of the fathers had done far more than supervise the making of the derby cars. In fact, many of the fathers bragged about how they had designed, cut and painted their son's cars - even going as far as adding "hidden" weights so they would go faster! One of the youngest boys in the Pack won a huge trophy for "Best in Show." His car was elaborately carved and decorated far beyond his capabilities.

We told our son he should be proud of his car because he had followed instructions and created it himself. Unfortunately, some of the other boys made our son feel their dads loved them more because they had made prettier, faster cars for them.

Abby, I am afraid this is another example of parents reliving their youth at the expense of their children. The fathers should never have taken over this project. What did these boys learn? That it's ok to cheat? I'd love to see this addressed because I know it happens all over the country.

Proud Mom in Ohio

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DEAR PROUD MOM,

You are describing parents who are determined to make sure their children succeed even if it means cutting a few corners. And you're absolutely right - I doubt that a trophy a child hasn't earned and knows isn't deserved will make him or her feel like a winner. The prize becomes meaningless. The child's abilities are diminished, and the youngster is left feeling that he or she can't perform.