

# GENTLEMEN, START YOUR ENGINES!

## Pack 437 2012 PINEWOOD DERBY Information, Rules, and Tips

### OVERVIEW:

The Annual Pinewood Derby is scheduled for Friday, **January 1<sup>st</sup>** in the school cafeteria. Car check in starts at 5:00 pm, dinner starts at 5:00 pm, racing about 6:15 pm. We will be holding another "Dad's Race" this year, more information to come later.

### IMPORTANT DATES:

- **Last Minute Car Cut-Out Assistance** – Master builder Dan Owens will be holding a car cut out night in the cafeteria at St. Roberts on December 28<sup>th</sup> at 6:00 pm. Please email Kevin Hatcher ([khatcher@cox.net](mailto:khatcher@cox.net)) if you plan on attending.
- **Pack 437 Derby Day** – Friday, January 13<sup>th</sup>, 6:00 pm, in the school cafeteria. The event normally runs about two hours. Bring ~~the family and friends!~~ *Snacks and dinner will be available for purchase from the concession stand. Cheer your favorite car to victory!*
- **Awards Ceremony** – TBA

### AWARDS:

There will be awards for the fastest cars in each Den and the Pack, as well as for design, creativity, etc.!

### Parent Tips for Helping Your Cub Build a PINEWOOD DERBY Car:

- **The number one challenge for parents** is to resist the temptation to do the work yourself. The idea is to *guide* and *instruct*, without actually *doing* the work for your son. Because you will have to *show* them what to do, and to avoid doing it yourself, demonstrate techniques on a scrap of wood and/or let them practice the use of a tool on a scrap. If you are worried about getting overly involved, consider making your own car! (Cars can be purchased at the Scout Shop.)
- **Start NOW!** This project will take several hours altogether. The more time you have, the better – this is not something you can do the night before!
- **Visit the Scout Shop**, a hobby store, or search the internet to get ideas. You can buy accessories (fenders, scoops, fins, windshields, etc.) as well as decals. You'll need the following at a minimum: sandpaper, paint, and weights (graphite dry lubricant is optional but highly recommended). See the BASIC RULES section below.
- **Look** in the back of a Boy's Life magazine for books you can buy, or search the internet for information about building and racing Pinewood Derby cars.
- **Begin by having the Scout create a design.** Trace the block of wood on a piece of paper several times and have your Scout play around with various designs. Decide whether he wants to go for speed (aerodynamics supposedly make a difference), looks, novelty/creativity, or all of these. (Keep the construction and design simple – too complex for younger Scouts will be frustrating and they will lose interest in working on it.) Encourage imagination. Animal shapes, themes, wild and wacky shapes or colors are all acceptable. It doesn't have to look like a race car – it does have to be able to roll down the track, however!

- **Once the car is rough cut, there will be lots of sanding/shaping to do.** Since a younger Scout's attention span is sometimes limited, assign them 5 to 10 minutes of sanding each day. Check their work periodically and guide them along. Use a soft lead pencil to mark the areas (spots, bumps, curves) that need additional sanding/shaping, and then have the Scout sand away your pencil marks.
- **Aim to have the construction completed at least a week ahead of time** so you can paint it, assemble the wheels, apply decals, etc., and have it weighed somewhere.
- **Weight is critical** – take the car to your local grocery store deli counter to have it weighed.

## Basic Rules:

- We will follow the rules and specifications as outlined in the OFFICIAL GRAND PRIX PINEWOOD DERBY KIT insert. **Please read it carefully and call if you have questions.**
- Previously built cars may not be used.
- **Only** the wheels and axles which come with the kit may be used. If the wheels don't have BSA stamped on them, they're not legal! Axle spacing/placement cannot be altered – you must use the grooves already cut into the car. Solid, one piece axles (which can be purchased at the Scout Shop and hobby stores) **are not allowed.**
- Once the cars have been inspected and weighed on race day, they are not to be handled again.
- **Rules violations will result in disqualification from awards (but not from racing).**

## Car Tips:

- **SIZE/SHAPE** – Read and follow the “CAR SPECIFICATIONS” section of the insert that comes in the car kit. Don't add anything on to your car that will make it longer or wider than the dimensions specified. Anything you add should be securely attached and not interfere with the running of your car, or the car on either side of yours.
- **WEIGHT** – The weight limit is 5 ounces per car, and the basic block of wood only weighs a couple of ounces. A heavier car goes faster. There are three types of ready made weights available for purchase, or you can attempt to add your own with washers, screws, accessories, etc. All things considered, the ready made weights are much preferred. One type of weight is a round cylinder of lead which you plug into a hole drilled into the car body somewhere. This can concentrate the weight in a certain part of the body, but is hard to adjust (add or subtract weight). A second type is a flat thin piece of lead, designed to fit under the belly of the car, and is easily adjustable. NOTE: This type of weight **must** be recessed into the belly of the car so that it does not scrape/drag on the track.
- **WEIGHING** – Before you *attach* the weights, take your car and the weights, wheels, axles, etc. to the Post Office, the grocery store Deli, Canfield's, or Hobby Lobby (any place with a good scale) to have it weighed. This will allow you to determine exactly how many weights need to be added. You'll be amazed how much additional weight it takes to get up to 5 ounces! You don't want to be adding or subtracting weight on race day.
- **WHEELS/AXLES** – Use **only** the axles and wheels that come with your official kit. Solid axles are not allowed. Axles and wheels can be sanded/polished to remove burrs and reduce friction. Wheels may also be “crowned” (slightly rounded over) to create a smaller tread surface (also reducing friction). Dry graphite powder lubricant can be applied to the axles and wheels. We will have a special area set up on race day for last minute graphite applications to your car. *Please do not apply graphite anywhere else in the cafeteria – this stuff is very messy!*
- **#1 TIP** – Probably the single most important ingredient in the speed of a car is how straight it will run. This is also the most difficult thing to achieve. Test your car on a smooth hard surface or ramp. If it pulls to one side, it will constantly bump the guide strip on the racetrack, and slow the car down a lot!
- **#2 TIP** – The center of balance on the car (front to back) should be approximately 1 inch in front of the rear axle.
- **#3 TIP** - This whole project will take twice as long as you probably think! Start early to avoid last minute, late night headaches!

Good luck, and have FUN!