



PACK 717

SPACE DERBY

WHEN: FRIDAY, MAY 28TH, 2010

WHERE: BARRE CITY PARK

TIME: 5:00PM – 7:00PM

Come join the fun as the rockets fly for this 3rd Annual Pack event. The Space Derby gives Scouts a great opportunity to show off their creativity, design, building and decorating skills to complete this project and compete in this race of rubber band-powered propeller model rockets.

The rocket kit comes complete with all the parts needed to build the rocket. These kits are designed for ease of assembly. Add a custom paint job, decals, sticker or whatever you want and you're off to the races!

Participants will receive a patch for their efforts. More importantly they will have pride in accomplishing another project where each Did Their Best!

The Official Derby Rules are attached. Please review these prior to assembling your rocket.

WARNING: THE LAUNCH IS SCHEDULED. THE COUNTDOWN HAS ALREADY BEGUN. FASTEN YOUR SEAT BELTS. WE' RE ABOUT TO BLAST OFF TO A GOOD TIME!

SPACE DERBY

OFFICIAL RULES

KITS

1. The Space Rocket must be created from an official Boy Scouts of America Kit only



2. You may *only* use the parts provided with the kits
3. The Space Rocket must have been made within the last month

SIZE

1. The overall rocket body (wood body) length shall not exceed 7 inches
2. The thickness of the body must be a minimum of 1/8 of an inch

PROPELLER/RUBBER BANDS

1. The nose cone (propeller assembly) must *not* be glued in place on the nose of the rocket. A notch or groove should be formed in the tail of the rocket to seat the band holding dowel. The band holding dowel must *not* be glued in place. (These rules allow band replacement in case of breaks)
2. The rocket propeller assembly (wire hook, propeller, nose, and bushing) shall not be greater than 1 1/4 inches

FINS

1. The fins shall not be shorter than 2 1/2 inches in length

PAINT/DETAILS

1. Any type of paint or detailing may be used
2. Paint must be dry at time of inspection. Rockets with wet paint will be disqualified.
3. There are no restrictions on the weight or design of the rocket. Rockets may be detailed in any way as long as it does not exceed length restrictions, is flight worthy, structurally sound and does not interfere with another rocket during the race.

LUBRICATION OF ROCKET PARTS

1. Use of graphite powder between the propeller and the bushing is allowed. Other forms of lubrication are prohibited
2. Use of spray silicon, or castor oil may be used to lubricate the rubber bands. Other forms of lubrication are prohibited

RACE TIPS

1. Reduce air friction or "drag" by making all surfaces as smooth as possible. A blunt, rounded nose causes less drag than a sharp nose. A good design has all leading edges rounded and trailing edges tapered to reduce the drag
2. To help increase the rocket's speed reduce the wall thickness to a minimum of 1/8 inch. Do not weaken the area around the hanger (carrier) or carve away the nose button circle
3. Make the propeller shaft as short as possible by bending it close to the prop. Cut off the excess wire with wire cutters
4. Experienced rocket racers "warm up" their space ships by gradually winding the rubber band motor to its full capacity-first 50 turns, then 100, etc. Release the propeller between each winding
5. The little plastic straw should go over the hook (not just the shaft as the drawing in the space derby kit illustrates). This is where the rubber bands will hook on - the wire hook can cut the rubber bands without the plastic straw liner properly installed!!
6. The plastic dowel at the rear of the space derby to hold the rubber bands **MUST** be kept from rotating (groove out the back so the dowel can sit in it!) - do not glue it!
7. **MOST IMPORTANT – ALL RACE PARTICIPANTS MUST HAVE LOTS OF FUN!**