

Please Read the Water Day Derby Handbook

Panther Districts First Water Rocket Derby Day

June 19th @CampElmore 9 am till Noon.

Scouts & Adults Pay \$5!



Bring a non-Cub Scout friend they get in free!

THIS IS ROCKET SCIENCE!

Important: You are responsible for bringing a Bag Lunch for your Scouts a chair, a hat, sunscreen, and your Fun. O Yea you might get wet!

Please Read the Water Day Derby Handbook

Water Rocket Construction Plans / Scout Rocket Derby

Introduction

Hello everyone,

In the following pages are instructions on a simple to build 2-liter water rocket. I have modified these instructions slightly from plans found on the web. Please note that both the nose cone, and decorations are optional.

All Scouts and Cubs (with adult help) are responsible for bringing a completed rocket to the derby.

The launchers, air source, and rocket fuel (water) will all be provided, as well as an instruction session that will start with a focus on safety and (eye protection and hard hats) "Mission Control" the volunteers in charge. Most people are quite surprised when they witness their first launch. The water rockets leave the launch pad at a speed of between 60 to 70 miles per hour! For that reason, as well as in case we have a bottle that pops, the launch pad will be 50 feet away from people.

The cubs can help place the rocket on the launch pad, then they will go 50 feet away to "mission control" to help remotely pressurize the rocket, and then pull the cord to launch.

Materials

- 2 - Two-Liter Bottles (for Rocket body)
- Foam Tray, or old real estate plastic sign, or foam poster board (Fins)
- Paper (Nose Cone) – Optional
- Tape (packing tape and duct tape work well)
- Scissors
- Decorations (spray paint, markers, stickers)
- **Cubs will need Help from an adult**

- **NO Metal Parts! Sharp Points! "Mission Control" will evaluate Rocket safety before Launch!**



Tips

- Try to make body smooth (no kinks with tape).

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- Do NOT use a hot glue gun to fasten parts of your rocket together. It will weaken the bottle and can lead to detonation on the launch pad! The same is true for epoxy. PL adhesive in a caulking tube, and Household Goop are ok if you really want to use adhesive,
- Do not leave two-liter bottles in hot car.(will weaken the bottle and can lead to detonation on the pad)

Be creative.

