Spring Rocket Camp

Partial Completion of the Space Exploration Merit Badge April 26-27th Frank Hunt Field, previously known as Pony Express Test Range in the West Desert (Map to be provided later) Registration is required to attend. squirelr@live.com The district will be selling rocket kits (one rocket & two motors) for \$10 each. <u>Money must be turned in by Feb 28th</u>.

You are still welcome to build your own rocket and come for the fun, this includes leaders.

We will be holding 3 events for those that want to complete their rockets and also complete the requirements for the Space Exploration Merit Badge.

March 13th, March 27th and April 10th at 6695 South 2200 W (the Roundtable Meetinghouse) at 6:30 pm

Contact Neil Nixon, 801-967-1816 or Terry Degarmo, 801-966-8060 for payment. Checks payable to the BSA

This event is dependent on the weather.

The following dates have been set for the building of the rockets. Wed. March 13th Wed. March 27th Wed. April 10th

All classes will be held from 7-9:00pm at the LDS Church at 6695 So. 2200 W. in the cultural hall.

Requirements

- 1. Tell the purpose of space exploration and include the following:
 - a. Historical reasons
 - b. Immediate goals in terms of specific knowledge
- Weds, March 13th c. Benefits related to Earth resources, technology, and new products
 - 2. Design a collector's card, with a picture on the front and information on the back, about your favorite space pioneer. Share your card and discuss four other space pioneers with your counselor.
 - 3. Build, launch, and recover a model rocket.* Make a second launch to accomplish a specific objective. (Rocket must be built to meet the safety code of the National Association of Rocketry. See the "Model Rocketry" chapter of the Space Exploration merit badge pamphlet.) Identify and explain the following rocket parts.
 - a. Body tube
 - b. Engine mount

Weds, March 27th

Weds, April 10th

d. Igniter

c. Fins

- e. Launch lug
- f. Nose cone
- g. Payload
- h. Recovery system
- i. Rocket engine
- 4. Discuss and demonstrate each of the following:
 - a. The law of action-reaction
 - b. How rocket engines work
 - c. How satellites stay in orbit
 - d. How satellite pictures of Earth and pictures of other planets are made and transmitted
- 5. Do TWO of the following:
 - a. Discuss with your counselor an unmanned space exploration mission and an early manned mission. Tell about each mission's major discoveries, its importance, and what we learned from it about the planets, moons, or regions of space explored.
 - b. Using magazine photographs, news clippings, and electronic articles (such as from the Internet), make a scrapbook about a current planetary mission.
 - c. Design an unmanned mission to another planet or moon that will return samples of its surface to Earth. Name the planet or moon your spacecraft will visit. Show how your design will cope with the conditions of the planet's or moon's environment.
- 6. Describe the purpose, operation, and components of ONE of the following:
 - a. Space shuttle

- b. International Space Station
- 7. 7. Design an inhabited base located on the Moon or Mars. Make drawings or a model of your base. In your design, consider and plan for the following:
 - a. Source of energy
 - b. How it will be constructed
 - c. Life-support system
 - d. Purpose and function
- 8. Discuss with your counselor two possible careers in space exploration that interest you. Find out the qualifications, education, and preparation required and discuss the major responsibilities of those positions.

Click on the following link for the full requirements & resources for the Space Exploration Merit Badge. <u>http://www.scouting.org/scoutsource/BoyScouts/AdvancementandAwards/MeritBadges/mb-SPEX.aspx</u>

If your scouts are going to build a rocket from scratch, on the 13 March 2013 each scout will need to bring all the materials on the list. That includes a box to keep the rocket safe. As troop they will the tools on the list.

If they started a rocket at the Pow Wow they should bring it. They should bring the rocket, supplies and tools to all 3 build sessions.

Rockets must be built to meet the safety code of the National Assoc. of Rocketry

Materials Need to Build a Rocket from Scratch.

Box to hold Materials	Paper all sorts.	Card Board	Big Bobbie Pin
Small Bobbie Pin	Masking Tape	White Glue	Super Glue
Spray on Glue	Hobby glue	Hot Glue	Thread or String
Packing Tape	Plastic Bag	Large Rubber Band	Paints
Soda Straw	Plastic Easter egg	or Block of wood	1.

Wire Coat Hanger (1 for every 6 Scouts), square of plywood and soft wire.

Tools are not Toys.

Cylinder app. 24 inches (exa	mple. 1" PVC sprinkler	pipe)	6" of ½ EMT e	lectrical conduit
2 Pair of Pliers	Pencil and sharpie	Scissors (Sharp)		Ruler
Paper Punch	Drop Cloth	Hot Glue Gun		Propane Torch
Compos for making circles	Lighter	Gloves	5	
Razor Knife or single edge razor blade		Sand Paper and Sanding Block		
Optional:				
Drill Motor(s)	Chisel (sharp)	Tool B	ox(4 tools)	paint brushes

Cleaning supplies

box of ashes?

http://www.youtube.com/watch?v=yurohmsmY_Y&feature=related http://www.youtube.com/watch?NR=1&feature=fvwp&v=4gCHkNkjA1g http://www.youtube.com/watch?NR=1&feature=fvwp&v=C5Dx3BTrPWY