Rockets for Schools
Frequently Asked Questions

What is Rockets for Schools?

The Great Lakes Spaceport Education Foundation, Inc. was founded in 1992 to promote aerospace awareness through hands-on education with students, teachers and the general public. Our objectives are:

* To stimulate knowledge about the benefits of aerospace.
* To increase public awareness of aerospace technologies and the importance of this technology for our environment and economic future.
* Promote aerospace education as an interdisciplinary framework for teaching math, science and technology.
* Inform and motivate students, educators and the public.

Rockets for Schools is our unique educational program designed to meet our stated goals. The Rockets for Schools program allows students to experience the excitement of building high power rockets, coordinating a rocket launch and working hands-on with industry professionals. This program is open to students of varied socio-economic backgrounds from a five state area in the Midwest.

Where is Space Port Sheboygan?

All Rockets for Schools activities take place at Space Port Sheboygan. Space Port Sheboygan is located in Sheboygan, Wisconsin, about 50 miles north of Milwaukee, along the shores of Lake Michigan.

Who can participate in Rockets for Schools?

Middle and High School students, grade 6 - 12, from any of the Midwest States can participate in the Secondary School Rocket Launches.

When are the 2010 launches scheduled?

The Secondary School Launch is scheduled for Friday, May 7th and Saturday, May 8th.

What does the Secondary Education Program consist of?

The Secondary School's program is separated in three parts:

* Rocket-for-Schools Competition
* Rocket launches and support activities
* Aerospace educational activities

What is the Rocket for Schools Competition?

Middle and High School students form their own launch teams with a maximum of ten members. Each launch team must have an adult adviser to be responsible for the students' activities during the launch weekend. After submitting a completed application, they are sent a high-powered rocket kit. There is some educational material to review and a worksheet to complete.

The Launch Teams are to complete the following tasks before arriving at Space Port Sheboygan for the launch:

* Build and finish their rocket (Class-1 or Class-2 kit)
* Design and build a payload to be launched in their rocket
* Design a mission patch and informational display about their payload
* Have all the forms completed and returned to us by April 10, 2010.

When the students arrive at Space Port Sheboygan for the launch, they set up their informational display. During the day Friday they will give a ten-minute presentation about their rocket and payload to a team of judges.

Each Launch Teams score is compiled based on the points earned in the following categories:

1. Rocket Construction 150 pts.
2. Rocketry Worksheet 100 pts.
3. Payload Design 50 pts.
4. Presentation 50 pts.

Is there more information regarding the grading criteria?

Rocket Construction
Student teams will be graded on their skill and attention to detail while building and finishing their rocket.

Rocketry Worksheet
Each advisor is asked to go to our web page (www.rockets4schools.org) and under education "Rocketry Basics" download the required reading information. This will include the worksheet. If you are unable to download this information contact us and we will send you the information.

After reviewing the "Rocketry Basics" study guide and viewing the "Rocket Motor Tutorial" the team members must complete the Rocketry Worksheet. **Only one worksheet per team**.

Payload Design
Students must design, build and fly a payload on their rocket. The students are encouraged to be creative in designing a payload to explore the unique environment of sounds, sights, acceleration and pressures experienced during a launch. There are two restrictions placed on your payload:

* Payloads must be less than 1.5 pounds in weight.
* No live animals are allowed in your payload.

Presentation
Your team must develop a "science fair" type display. The display should contain a "Mission Patch" designed by the team members. Also, your display should contain information on your payload experiment. A 40" x 30" space on a display table will be set aside for your display. Your display will be available for public viewing during the entire weekend.

Each team will be required to give a 5 - 10 minute presentation during Friday afternoon. Presentations will be given at your display.

This presentation must include:

* Introduction of team members
* Discussion of your mission patch
* Discussion of your payload
* What your team learned

What does the Rocket Launch and Support Activities consist of?

Each launch team has an opportunity to be at the launch pad to help prepare the rocket for flight. One of the team members will also push the launch button to ignite their rocket's engine.

When the launch team is not at the launch pad, they will be performing jobs in support of the launch day activities. Individual launch team members will be assigned to one the following areas:

* Mission Control
* Rocket Tracking
* Recovery (Weather Permitting)
* Balloon Launching
* Video Production

What Aerospace Educational Activities are planned for the Secondary Students?

The students will have an opportunity to view presentations given by a NASA Astronaut and other aerospace professionals. There is also an aerospace expo with many interesting displays for the students to explore. Some of the exhibits planned are:

* A multi-media bus from NASA showing the work performed at the Glenn Research Center in Ohio.
* A micro-gravity drop tower to demonstrate the effects of weightlessness.
* Advanced high-power rockets from Tripoli Rockery Association, Inc.
* Pictures of Earth taken from the Space Shuttle.

What is the difference between the Class-1 and Class-2 rockets?

There are two different rocket kits available to the Rockets for Schools launch teams. **First time teams** are required build the Class -1 rocket. Our class-1 rocket is 4 inches in diameter and 6 feet high and will reach an altitude 2500 feet.

Launch teams that have previously flown a Class -1 rocket can choose to build the Class -2 rocket. Our Class -2 rocket is 5.5 inches in diameter and will reach an altitude of 5000 feet.

The high-power rockets look very large. How safe is this activity?

We are very concerned with safety during our event and take every precaution to ensure the launches are conducted safely.

All rockets are inspected by members of the Tripoli Rocketry Association to ensure they can be flown safely. Any problems found with the rocket's construction are corrected before the rockets are taken to the launch pad.

Launch operations follow Tripoli safety guidelines and are conducted by Tripoli personnel. The marine and air space is controlled by the Coast Guard and Civil Air Patrol respectively to ensure the launch can proceed safely.

All rockets launches are directed over Lake Michigan. If there is a rocket failure, they will splash down safely in the water.

What is the cost of the Secondary Launch program?

Each launch team is can contain up to 10 students. Our program fee is as follows:

Class-1 Rocket -- $430 *($250 Team Entry Fee & $180 Rocket/motor Cost)*
Class-2 Rocket -- $560 *($250 Team Entry Fee & $310 Rocket/motor Cost)*

Please note that the Launch Team program fee includes the cost of the rocket kit. The rocket kit includes illustrated, step by step instructions and all parts necessary for construction (except epoxy, paint and payload). Motors are furnished on launch day.

Where can I get more information?

Additional information can be requested by contacting Rockets for Schools at:

Email - carol@rockets4schools.org

Phone - 920.458.6299

Can someone meet with my group to further explain your program?

Yes. We are available to make a presentation to your group. Please contact us to make arrangements.