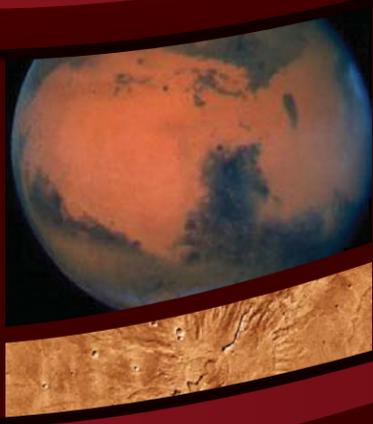


SPACE SCHOOL

5 DAY EXPERIENCE



Students in Space Center Houston's Space School will be a 5-day engineering mission to land a rover on the surface of Mars! They will analyze rock samples with a Reflectance Spectrometer, loft a rock sample into Martian orbit, and return it back to Earth in a rocket of their own design.

All the time, working within a NASA budget; knowing that funds or supplies for your projects may be decreased at any time due to budget cuts, safety regulations, or any other excuse the staff may give to make the experience truly dynamic and representative of the real NASA world.



PROGRAMS & PROJECTS

MISSION: Teamwork, Problem Solving, Fiscal Responsibility, Communication & Adaptation to Unexpected Problems.

DESIGN, BUILD & LAUNCH A ROCKET

Students will engineer a rocket of their own design, including deciding which rocket parts are needed and what they can afford given their own NASA project. Rockets will be launched at NASA's Johnson Space Center (weather permitting).

BUILD A ROBOTIC MARS ROVER

Given a set of parameters and tasks each rover must accomplish on Mars, students must decide how to create a robotic rover. They start with price lists for supplies and given varying criteria, students design, build and test their rover. Teams put their rovers to the test on a Martian landscape competition to locate and retrieve the Martian rocks most valuable to NASA.

ENGINEER A ROVER LANDER

During this phase of the mission, teams must design and create a lander which will safely protect its rover payload from the impact of landing on the Martian surface. Payload protection is critical as the success of the rover mission cannot be accomplished if the rover is damaged before it is able to explore Mars. Working within a budget, students must ensure their cargo can withstand the impact of a 3-story drop; as well as, reach a predetermined landing site.

LOFTING INTO SPACE

Students will engineer an apparatus capable of carrying all of its rocket pieces safely upwards 2-stories at a 60-degree angle of ascent. Within a budget, students will design and redesign an ascent vehicle methodically and with considerable problem solving.

STUDENT PRESENTATIONS

Given information about specific topics, all groups must present the necessary information to accomplish their rocket, rover, landing and lofting projects. Each team will have different, but vital

pieces of information which must be shared with all groups in order to ensure success. Since teams do not have the same information, communication is critical! Space Center Houston administration and all teams evaluate presentations for style and content knowledge.

WOW! NASA TOURS

Several tours are given at Johnson Space Center, highlighting both Mars and project related themes. See historic Mission Control Centers and the Space Station Mock-up Facility with its life-sized models of the International Space Station and Space Shuttle. Visit the Neutral Buoyancy Laboratory where astronauts train for Extravehicular Activities (EVA) in simulated microgravity. See up-close the rockets used in the early space program, as well as experimental X-vehicles.

TALK TO NASA EXPERTS

Hear a wide variety of presentations by NASA personnel who are really making space exploration happen. Topics may include: Space Exploration, Rocket Propulsion, Mission Control, the Space Program, the International Space Station, Space Shuttle, Robotics or Space Physiology.

SPACE CENTER HOUSTON
Discover Intelligent Fun!