CHALLENGER
Missions & e-Mission

inspire

E-MISSION OPERATION MONTSERRAT

excite

RENDEZVOUS WITH A COMET

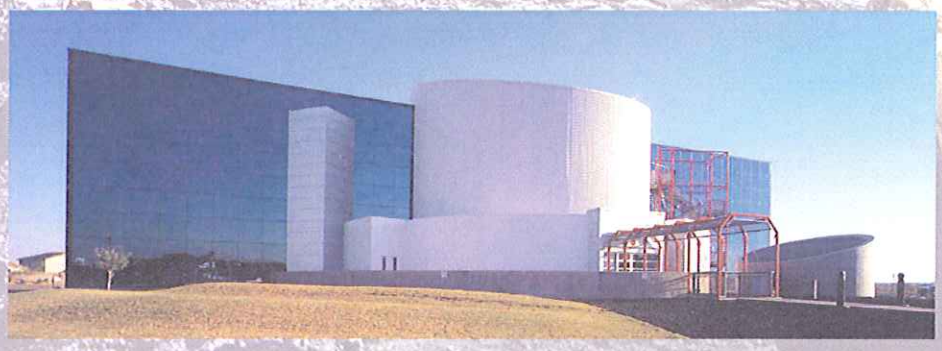
RETURN TO THE MOON

educate

VOYAGE TO MARS

The Challenger Mission:
Inspire, excite and educate people of all ages about the mysteries and wonders of space, science and the universe in which we live.

Plan your next Educational Mission at



CHALLENGER
space center
ARIZONA

In association with the
Smithsonian Institution

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623.322.2001 ~ www.azchallenger.org ~ fax: 623.322.3716

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For more information visit www.azchallenger.org or call to schedule your Mission 623-322-2033

e-Mission

e-Mission Operation Montserrat is an electronic mission that challenges students, 6th – 12th grade, to apply their science and math skills to an authentic crisis situation. During the 2½ hour e-Mission, student specialists serve as members of a team: volcano, hurricane, evacuation, or communication.

Operation Montserrat Island, a new electronic mission, connects a Flight Director at the Challenger Space Center in Peoria, Arizona, with a classroom anywhere in the world for a unique learning adventure. With the help of computers, the Internet, and a small video camera, students interact with a Peoria-based Flight Director to track the hurricane, predict volcanic rock fall, and determine how these conditions will impact the island's air, land, water, and vegetation. For detailed information, visit our e-Mission website at www.azemission.org , Teacher Tool Kit.

Simulated Space Mission

Comet, Moon and Mars Missions are designed for one classroom (classes in excess of 32 please call for additional instructions) in 5th – 12th grade. Each 3 hour simulated space mission incorporates hands-on learning and problem solving to provide a rich and memorable experience.

Mission preparation begins well in advance of the scheduled lift off of the students. The classroom teacher attends a 4-hour seminar in preparation for the administration of a 4-6 week curriculum. Resume writing, chromatography, developing a mission patch and team building exercises are just a few of the activities in this curriculum.

After several weeks of preparation, the students arrive at the Challenger Space Center for their scheduled lift off. The crew will be divided in half with one group going into space and the other group acting as the brains behind the operation in Mission Control. The simulation includes a simulated space launch. An expected emergency in both Comet and Moon scenarios allows each student the opportunity to experience both Spacecraft and Mission Control.

Rendezvous with a Comet - Team members will work as scientists and engineers headed to Rendezvous with a Comet as part of the continued study of our Solar System. These rendezvous missions are critical in helping scientists verify and better understand data collected by other missions currently occurring, such as STARDUST and its capture of material from the coma of Comet Wild-2 in 2004 and the return of that material to Earth in 2006. The actual samples provided by STARDUST will establish baseline data on comets that will be used for future explorations.

Return to the Moon – In the Return to the Moon mission, this crew of astronauts-for the first time since Apollo 17 mission in 1972-will land on the surface of the Moon. The time the astronauts are there to establish a permanent base with the core goals of: Establishing an observation program to study the Earth and other Solar System bodies without the interference of the Earth's atmosphere, testing the feasibility of a self-sustaining, off-planet settlement and serving as a staging area for additional human exploration of our Solar System.

Voyage to Mars - Mars Control team must choose the entry and departure trajectories before the landing and later lift-off of the Mars Transport Vehicle can occur. The crew on the Mars Transport Vehicle is tasked with building and launching a probe to one of the two moons of Mars. The crew will be given information about *Phobos* and *Deimos* during the mid-brief portion of the mission, and base their choice on facts and data presented at this time. Both the relief crew and the planet-based crew will be under tight deadlines to gather important data and communicate information to the teams, the Mars Transport Vehicle, and Mars base. The crew also will gain an appreciation for the "luxuries" of planet Earth – such as air, water and food – as compared to a barren planet such as Mars.