



30 Venture Way
Bangor, ME 04401
(207) 990-2900
www.astronaut.org

Challenger Learning Center Missions promote:

- Interest in STEM Disciplines and Careers
- Independent Learning
- The Value of Accurate Data Collection and Analysis
- Classroom Community Building
- Problem-Solving
- Effective Communication



**Inspiring.
Exploring.
Learning.
It's our
MISSION.**

Challenger programs are flexible in nature. We are glad to offer modifications that will best meet each school's curriculum.

In addition to the simulation experience, participation in Challenger programs gives schools access to numerous **pre- and post-mission curriculum materials** and **support** from our Education Director, allowing teachers to fully **integrate the mission** into the curriculum. During each year of participation, teachers are given **professional development**, new curriculum ideas, and guided access to **NASA materials**. We also provide periodic announcements on **science opportunities for the classroom**, grant ideas, and schedules of web and pod casts, all for no additional charge.

MISSION SIMULATIONS OVERVIEW

SCENARIOS	CREW QUALIFICATIONS	CREW SIZE	MISSION DURATION	TEACHER P.D.	COST
Exploration Lab	GRADE K-5	12-26	2.0 HOURS	Packet	\$400
Rendezvous w/Comet	GRADE 5-10	16-32	2.5 HOURS	Workshop	\$650
Return to the Moon	GRADE 6-10	16-32	2.5 HOURS	Workshop	\$650
Earth from Orbit	GRADE 6-10	16-32	2.5 HOURS	Workshop	\$650

Exploration Lab An introduction to lab science and process skills. During this program students will have a chance to try out several stations in the Mission Control and Space Lab simulators. Skills may include reading coordinates, using a balance, rock identification, following directions, effective communication, and data collection.

Rendezvous with a Comet™ A team of scientists and engineers are on a daring mission that requires them to work together while facing obstacles and emergencies on their pathway to success. With a focus on the enterprise of science, teams will collect and analyze data to ensure the safety of the crew, simultaneously conducting important research for the benefit of humankind.

Return to the Moon™ For the first time since 1972, a crew of astronauts is returning to the Moon. Their mission is to determine the location of a future base on the Moon, as well as test the feasibility of off-Earth settlements. Navigating their way into lunar orbit, students must construct and launch a probe, and analyze a variety of data gathered from the lunar surface to select a site for establishing the permanent Moon base.

Earth from Orbit A team of scientists and engineers has been called in to construct and deploy a new satellite and retrieve important data about the Earth and its environment. Students collect data, avert disasters, and learn about the intricate relationships of the facets of Earth's system: atmosphere, hydrosphere, biosphere, and lithosphere.



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OFFERED
AT
YOUR SCHOOL
OR
AT CHALLENGER

Programs for Grades K-8 promote:

- Interest in STEM Disciplines and Careers
- Independent Learning
- The Value of Accurate Data Collection and Analysis
- Classroom Community Building
- Problem-Solving
- Effective Communication

All programs are designed to build competency and interest in Science, Technology, Engineering and Mathematics (STEM)

Programs are hands-on, minds-on learning, rich in science content and aligned to the current standards. Modules are designed for groups of 5-25 and run for two hours, ranging from \$250 to \$350, plus travel (if applicable). Simulations last up to two 1/2 hours, ranging from \$400 to \$650.

SCIENCE MODULES

ASTRONAUT LIFE Includes several hands-on activities that give students a first-hand look at what it is like to live and work like an astronaut in space.

PLANETS Students perform activities that demonstrate the distance, scale, and features of our nearest planetary neighbors.

STORIES IN THE SKY An overview of star types and constellations, followed by activities such as pinhole planetarium, constellation creation and use of Challenger's unique inflatable planetarium.

ENGINEERING MODULES

BLAST-OFF Young engineers build a rocket using simple materials and learn about the engineering design process, principles of flight, and analyzing and communicating results.

LEGO ROBOT PROGRAMMING (GRADES 2-5) Introduction to robotic building and integrating sensors. Students learn programming basics and experiment with programming language using LEGO WeDo kits. (At Challenger)

ROVERS (GRADES 5-8) Students engage in an overview of engineering and the design process, followed by the opportunity to design, test, and redesign a rover, and share results.

SIMULATIONS (at Challenger)

Students will engage in the enterprise of science while applying skills in STEM. The jobs they perform will complement their in-class work and provide experiences that are not possible in the classroom. They will be required to solve problems, communicate effectively, make good decisions and work as a team to achieve success. Please see Mission Simulations Overview for descriptions of the following scenarios:

Exploration Lab GRADES K-5 / Rendezvous with a Comet™ GRADES 5 + / Return to the Moon™ GRADES 6 + / Earth from Orbit GRADES 6 +

Many other science and art lessons are available. FMI: (207) 990-2900 ext. 3