

POWERHOUSE SCIENCE CENTER

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Voyage to Mars

Topics

Space travel

Grades

5-8

Duration

120 minutes

Vocabulary

Available on website

<https://sacramentoclc.com/>

Next Generation

Science Standards

Practices

Analyzing & Interpreting
Data

Using Mathematics &
Computational Thinking
Obtaining, Evaluating, &
Communicating Information

Core Ideas

PS1 Matter and Its
Interactions

ESS1 Earth's Place in the
Universe

Crosscutting Concepts

Patterns

Systems and System Models
Scale, Proportion, and
Quantity

Core Ideas

5-PS1-3—Make observations
and measurements to
identify materials based on
their properties.

5-ESS1-2—Represent data in
graphical displays to
reveal patterns of daily
changes in length and
direction of shadows, day
and night, and the seasonal
appearance of some stars in
the night sky.

Overview

Designed in cooperation with NASA, Challenger Missions are interactive educational programs which use the excitement of space flight simulations to inspire students. As students participate in the mission scenario, they apply math, science, technology, and language arts to solve real-life challenges.

In the context of their simulated mission, students plan and carry out investigations individually and as a team, and must communicate the information they obtain to further the group's mission. Space science serves as the backdrop for an amalgamation of many skills.

Objectives

- Students will use the scientific inquiry process to define a problem, complete research to understand the problem, complete experiments, and analyze those results. This process will involve distribution of labor where one group is working on the experimental process and one is working on the analysis, with those groups switching at the halfway point.
- Students will learn about the cross discipline nature of sending humans into space.
- Students will discover the different jobs behind sending people into space, with an emphasis on jobs that do not involve going into space.
- Students will apply skills learned through school to solve problems and achieve success.
- Students will work in teams to accomplish tasks that lead to the success of the whole group.
- Students will use critical thinking to correct mistakes and solve problems.

Teacher Preparation

For your convenience, we have compiled all resources relating to the mission including pre-visit prep and post-visit extensions at our dedicated website:

<https://sacramentoclc.com/>