



Mission to Mars

Reviewed 2022

Format: Wonder Workshop

Grades: 3rd- 6th

Length: 45 minutes

General Description: Work together to solve problems in space.

Big Idea: Technology and inventions help humans explore and live in space.

Key Concepts:

- Space travel presents astronauts with unique challenges that must be overcome in order to survive.
- Astronauts need technical skills, problem solving abilities and teamwork to complete missions.
- Mars has features that are different from those on Earth.

Colorado Academic Standards:

- **3-ESS3-GLE2** A variety of weather hazards result from natural process; humans cannot eliminate weather-related hazards but can reduce their impacts.
- **4-ESS3-GLE4** Energy and fuels that humans use are derived from natural sources and their use affects the environment in multiple ways.
- **5-ESS3-GLE1** Motion is predictable in both solar systems and galaxies.
- **5-ESS3-GLE8** Humans depend on Earth's land, ocean, atmosphere, and biosphere for different resources, many of which are limited or not renewable. Resources are distributed unevenly around the planet as a result of past geologic processes.

2020 Academic Standards update: NGSS

- **3-5-ETS1-1.** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- **3-5-ETS1-2.** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- **3-5-ETS1-3.** Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.
- **MS-ESS-3:** A Natural Resources: Humans depend on Earth's land, ocean, atmosphere, and biosphere for many different resources. Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as a result of past geologic processes.