



## GK12 Module Teacher's Guide

### MARS

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#### Abstract:

The combination of these activities is designed to give students a general overview of the planet Mars. The first activity (Mars - Physical Characteristics) will allow students to understand some of the basic physical characteristics of Mars by applying some simple physics to figure out their weight on Mars. The second activity (Mars - Orbit) will allow students to examine the orbit of Mars by comparing it to the Earth's. They will gain an understanding of the size of Mars' rotation around the sun by computing their age in Martian years. The third activity (Mars - Environment) will allow students to use their knowledge of Mars and of living organisms to create a Martian. They will have to consider what type of adaptations an organism would need to survive on Mars. The fourth activity (Mars - Features) will allow students to use Mars fact sheets and graph paper to understand the scale of Mars features by comparing them to Earth's features.

Grade Level(s): 6-8

#### Objectives:

- Understand the physical characteristics of Mars including the size of the planet, the mass of the planet.
- Understand that weight is a force that is dependent on gravity, both on Mars and on Earth.
- Understand that Mars' orbit is much larger than the earth's.
- Understand that Mars' day (sol) is longer than the Earth's 24-hour day.
- Understand that the Polar tilt of Mars causes seasons similar to Earth's.
- Predict the type of organism that might survive on Mars.
- Draw a model of a possible Martian.
- Write a description of the life form and its living conditions.
- Understand the Mars environment and what that means for an organisms survival.
- Understand the size of Martian features.
- Use a scale to represent different sizes of objects.