



PLANETS AND MOONS



Explore the farthest reaches of our solar system and create a lunar eclipse on our home planet. See the size difference between the Earth and its moon. Build your very own Mad Science® Gravity Assisted Launcher to simulate how gravitational pull affects a probe in space.

SUMMARY:

In this class, children set off on a voyage to discover the Solar System. They impersonate the planets to compare their sizes and distances from the sun, recreate a solar and lunar eclipse, and work out the relative size and distance of the Earth and its moon. Children learn how rockets escape the pull of gravity and build a Mad Science® Gravity Assisted Launcher game to send probes into space!

EDUCATIONAL VALUE:

In Planets and Moons, children use models and scaling in order to understand the relative size and distance of objects in our Solar System. Children experiment with eclipses and learn just how far away our moon is! Children learn about the forces needed to escape gravity. They then build a Mad Science® Gravity Assisted Launcher set to send a metal sphere across a model solar system.

TAKE-HOME MESSAGE:

- 1 A lunar eclipse happens when the Earth casts its shadow on the Moon.
- 2 The smallest planets are made up of rocks. The largest are made up of gases
- 3 The scientist Johannes Kepler figured out how the planets move in our solar system.

TAKE-HOME PRODUCT:

Mad Science® Gravity Assisted Launcher

NORTH CAROLINA ESSENTIAL STANDARDS:

- 1.E.1 Recognize the features and patterns of the earth/moon/sun system as observed from Earth.
- 3.E.1.1 Recognize that the earth is part of a system called the solar system that includes the sun (a star), planets, and many moons and the earth is the third planet from the sun in our solar system.
- 4.E.1 Explain the causes of day and night and phases of the moon.

