

FOURTH GRADE PREPARATION

SCIENCE

SOLAR SYSTEM

Students become familiar with objects in our solar system. They gain a perspective on the physical relationship between objects in the solar system. Students model planets, combine astronomy and geometry to study ellipses and planetary orbits. Study stars and their celestial patterns. Students also observe and document moon phases.

Using models scientists can predict and show evidence for the elliptical orbit of the earth around the sun, day and night and seasons.

Outdoor shadows change predictably in length and direction during the day.

The earth spins on its axis in 24 hours causing day and night.

The moon orbits the earth on average every 27 days.

All planets orbit the sun.

CIRCUITS & PATHWAYS

Students explore the properties of electricity in simple circuits. They use motors, batteries, wire, bulbs and switches to explore the concepts of a circuit, contact points and multiple pathways.

Some materials conduct electricity (conductors) and some do not (insulators).

Electricity needs a complete circular pathway (circuit) to flow.

Some circuits have only one pathway (series), and some circuits have multiple pathways (parallel).

Series and parallel circuits have different behaviors.

INVESTIGATING THE CHANGING EARTH

Students explore changes in the Earth's surface caused by weathering and erosion. Using stream tables they develop explanations for delta deposition, canyon formation, floods, and other stream-related phenomena.

The surface of the Earth is constantly changing. In ways that can occur very quickly, or slowly and are hard to observe.

Weathering causes the breakdown of earth materials in both physical and chemical ways.

Weathering primarily results from the effects of wind and water.

Erosion refers to the transport or carrying away of weathered particles.