

Dear Parents,

During the 2nd nine weeks we will be learning about energy, force and motion, soil and resources in 3rd grade science. The following concepts will be covered:

Student Expectation

- explore different forms of energy, including mechanical, light, sound, and thermal in everyday life
- demonstrate and observe how position and motion can be changed by pushing and pulling objects to show work being done, such as swings, balls, and wagons
- observe forces, such as magnetism and gravity acting on objects
- explore and record how soils are formed by weathering of rock and the decomposition of plant and animal remains.
- investigate rapid changes in Earth's surface, such as volcanic eruptions, earthquakes, and landslides.
- explore the characteristics of natural resources that make them useful in products and materials, such as clothing and furniture, and how resources may be conserved.

Key Concepts

- Mechanical, light, sound, and thermal energy are useful in everyday life.
- Heat energy helps cook food and keeps us warm in winter, while mechanical energy is associated with movement.
- Work happens when a force is used to move an object over a distance.
- Tools such as swings, balls, and wagons can be used to help move objects.
- Gravity is a force that can move objects by pulling them toward each other.
- Magnetism is a force that can move objects by attracting them together or repelling them apart.
- Forces, including gravity and magnetism, can have observable effects on objects.
- Weathering is the process that breaks down Earth's rocks into smaller and smaller pieces over time.
- Soils are made up of small pieces of weathered rock and contains many substances including decomposed plant and animal remains.
- Large forces can change the Earth's surface rapidly. Volcanic eruptions and earthquakes can cause rapid changes on Earth's surface such as creating new land, making cracks in the crust, or changing landforms. Landslides can cause rapid change to Earth's surface such as rocks and debris falling from a rock face.
- Natural resources, such as oil, coal, metals, rocks, soil, air, water, plants, and animals, come from the Earth. Characteristics of natural resources make them useful such as the fibers of cotton to produce cloth or the strength of wood to make furniture.
- Natural resources can be conserved by using less, by recycling, and by reusing.

Fundamental Questions

- What is mechanical energy and how do we use it?
- What is heat energy and how do we use it?
- What is light energy and how do we use it?
- How can we cause an object to change position and to move?
- What is gravity and what effect does it have on objects?
- What is magnetism and what effect does it have on objects?

Helpful websites and STEMscope login information can be found on the Eagle Mountain Saginaw ISD website on the Curriculum and Instruction Science page.

Having a great year in science!

The 3rd Grade Science Team