

# Science and Technology/Engineering

## Grade 3

### *Earth and Space Science Standards*

#### *Rocks and Their Properties*

- ❖ Give a simple explanation of what a mineral is and some examples
- ❖ Identify the physical properties of minerals (hardness, color, luster...) and explain how they can be tested for different physical properties
- ❖ Identify the three categories of rocks based on how they are formed, and explain the natural and physical processes that create these rocks (metamorphic, igneous and sedimentary)

#### *Earth's History*

- ❖ Give examples of how the surface of the earth changes due to slow processes such as volcanic eruptions and earthquakes

#### *Weather*

- ❖ Differentiate between weather and climate

#### *Water Cycle*

- ❖ Describe how water on earth cycles in different forms and in different locations, including underground and in the atmosphere
- ❖ Give examples of how the cycling of water both in and out of the atmosphere has an effect on climate

### *Life Science Standards*

#### *Characteristics of Plants and Animals*

- ❖ Classify plants according to the physical characteristics that they share

#### *Plant Structures and Functions*

- ❖ Identify the structures in plants (leaves, roots, flowers, stem, bark, wood) that are responsible for food production, support, water transport, reproduction, growth and protection
- ❖ Plants go through predictable life cycles (birth, growth, development, reproduction, and death)
- ❖ Differentiate between observed characteristics of plants that are fully inherited (color of flower, shape of leaves) and characteristics that are affected by the environment or climate (browning of leaves due to too much sun)

#### *Adaptations of Living Things*

- ❖ Recognize plant behaviors such as seedling stems grow toward light and roots grow downward responding to gravity. Recognize many plants can survive harsh environments because of seasonal behavior (in winter some trees shed leaves)

### *Physical Sciences Standards*

#### *Properties of Objects and Materials*

- ❖ Differentiate between the properties of objects (size, shape and weight) and properties of materials (color, texture and hardness)

#### *States of Matter*

- ❖ Compare and contrast solids, liquids and gasses based on the properties of each of these states of matter
- ❖ Describe how water can be changed from one state to another by adding or taking away heat