

Students will be able to: SKILLS IN INQUIRY-BASED LEARNING

- Ask questions and make predictions that can be tested.
- Select and use appropriate tools and technology (*ruler, meter stick, thermometer, hand lens, and balance*) to gather data and extend observations.
- Keep accurate records while conducting simple investigations or experiments.
- Conduct multiple trials to test a prediction. Compare the results of an investigation or experiment with the prediction.
- Recognize simple patterns in data and use data to create a reasonable explanation for the results of an investigation or experiment.
- Record data and communicate findings to others using graphs, charts, maps, models, and oral and written reports.

Students will be able to: EARTH AND SPACE SCIENCE

- Recognize that the Earth is part of a system called the “solar system” that includes the Sun (*a star*), planets and many moons. The Earth is the third planet from the Sun in our solar system.
- Recognize that the Earth revolves around (*orbits*) the Sun in a year’s time and that the earth rotates on its axis once approximately every 24 hours.
- Make connections between the rotation of the Earth and day/night, and the apparent movement of the Sun, moon, and stars across the sky.
- Describe the changes that occur in the observable shape of the moon over the course of a month.
- Give a simple explanation of what a mineral is and some examples, (*quartz, mica*).
- Identify the physical properties of minerals, (*hardness, color, luster, cleavage, and streak*), and explain how these minerals can be tested for these different physical properties.
- Identify the three categories of rocks (*metamorphic, igneous, and sedimentary*) based on how they are formed, and explain the natural and physical processes that create these rocks.

Students will be able to: LIFE SCIENCE

- Classify plants and animals according to the physical characteristics they share.
- Recognize that plants and animals go through predictable life cycles that include birth, growth, development, reproduction, and death.
- Describe the major stages that characterize the life cycle of the frog and butterfly as they go through metamorphosis.
- Differentiate between observed characteristics of plants and animals that are fully inherited (*color of flower, shape of leaves, color of eyes, number of appendages*) and characteristics that are affected by the climate or environment (*browning of leaves due to too much sun, language spoken*).
- Recognize plant behaviors, such as the way seedlings’ stems grow toward light and their roots grow downward in response to gravity.
- Describe how energy derived from the Sun is used by plants to produce sugars (*photosynthesis*) and is transferred within a food chain from producers to consumers to decomposers.

*Students will be able to:*

PHYSICAL SCIENCE

- Compare and contrast solids, liquids and gases based on the basic properties on each of these states of matter.
- Identify the basic forms of energy (*light, sound, heat, electrical, and magnetic*). Recognize that energy is the ability to cause motion or create change.
- Give examples of how energy can be transferred from one form to another.
- Recognize that sound is produced by vibrating objects and requires a medium through which to travel. Relate the rate of vibration to the pitch of the sound.
- Recognize that light travels in a straight line until it strikes an object or travels from one medium to another, and that light can be reflected, refracted and absorbed.

*Students will be able to:*

TECHNOLOGY/ENGINEERING

- Identify materials used to accomplish a design task based on a specific property. (*weight, strength, hardness, and flexibility*)
- Identify and explain the difference between simple and complex machines. (*hand can opener that includes multiple gears, wheel, wedge, and lever*)
- Identify a problem that reflects the need for shelter, storage, or convenience.
- Describe different ways in which a problem can be represented. (*sketches, diagrams, graphic organizers, and lists*)
- Identify relevant design features, (*size, shape, weight*), for building a prototype of a solution to a given problem.