

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 sticks, thermometers, hand lenses, and balances*) 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

- Describe how water 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.
- 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.
- Explain and give examples of the ways in which soil is formed. (*the weathering of rock by water and wind and from the decomposition of plant and animal remains*)
- Recognize and discuss the different properties of soil, including color, texture (*size of particles*), the ability to retain water, and the ability to support the growth of plants.
- Give examples of how the surface of the Earth changes due to slow processes such as erosion and weathering, and rapid processes such as landslides, volcanic eruptions, and earthquakes.

Students will be able to: LIFE SCIENCE

- Classify plants and animals according to the physical characteristics that they share.
- Identify the structures in plants (*leaves, roots, flowers, stem, bark, wood*) that are responsible for food production, support, water transport, reproduction, growth, and protection.
- 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/or butterfly as they go through metamorphosis.
- 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 SCIENCES

- Differentiate between properties of objects (*size, shape, weight*) and properties of materials (*color, texture, and hardness*).
- Compare and contrast solids, liquids, and gases based on the basic 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.
- 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.

*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 appropriate materials and tools (*hammer, screwdriver, pliers, tape measure, screws, nails, and other mechanical fasteners*) to construct a given prototype safely.
- 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*)