

Strand:

S1 Scientific Inquiry

The student demonstrates abilities necessary to do scientific inquiry and an understanding about scientific inquiry; that is, the student:

Standards:

- S1a:** asks questions about objects, organisms, events and relationships in the environment.
- S1b:** accesses information from a variety of sources.
- S1c:** plans and conducts explorations and simple investigations.
- S1d:** uses simple equipment and tools to observe, gather, and record data.
- S1e:** uses observations and recorded data to construct reasonable explanations.
- S1f:** communicates scientific explorations, investigations and explanations through speaking, drawing, and writing.

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S2 History and Nature of Science

The student demonstrates an understanding of science as a human endeavor; that is, the student:

Standards:

- S2a:** demonstrates curiosity and initiative in thinking about and doing science.
- S2b:** works alone or as a team member when engaged in science, and shares ideas and explains scientific findings.
- S2c:** recognizes that people of all ages, backgrounds, and groups have made contributions to science and technology.

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S3 Science in Personal and Social Perspectives

The student demonstrates an understanding of safety, types of resources, and changes in the environment; that is, the student:

Standards:

- S3a:** demonstrates personal and group safety when engaged in science at school.
- S3b:** identifies and compares sources and quantities of resources.
- S3c:** practices conservation of resources.

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S4 Science and Technology

The student demonstrates an understanding about science and technology and the nature of technological design; that is, the student:

Standards:

- S4a:** explains how tools are designed to help people to extend their senses and solve problems.
- S4b:** uses tools to measure, construct, and test their own product/design.
- S4c:** explains how tools and technology are used to make our lives easier.

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S5 Physical Science	The student demonstrates an understanding of matter, motion, and energy; that is, the student:
Standard:	S5a: recognizes that materials exist in different states.
Components:	S5a.1: Materials can exist in different states-solid, liquid, and gas. They take up space and have weight. Some common materials, such as water, can be changed from one state to another by heating or cooling. S5a.2: Heating, cutting, and freezing may or may not change some of the properties of materials.
Standard:	S5b: demonstrates how pushing and pulling will change the movement of an object related to its speed, position, and direction.
Components:	S5b.1: Things move in many different ways, such as straight, zigzag, round and round, back and forth, and fast and slow. S5b.2: The way to change how something is moving is to give it a push or a pull.
Standard:	S5c: explores light, heat, and magnetism as forms of energy.
Components:	S5c.1: Light is a form of energy. S5c.2: The sun provides both light and heat to warm the land, air, and water. S5c.3: Some materials conduct heat better than others. S5c.4: A push or pull force exists between magnets. S5c.5: Magnets can be used to make some things move without being touched.
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S6: Life Science	The student demonstrates an understanding of the characteristics of organisms, their life cycles, and their environments; that is, the student:
Standard:	S6a: identifies and describes the physical characteristics of plants and animals that live in their environments.
Components:	S6a.1: Different animals and plants may occupy different habitats. S6a.2: Organisms that occupy different environments tend to have physical characteristics that reflect the particular environment where they live. Plants in the desert look different (special structures for storing water, special structures to limit evaporation of water, special structures to capture/collect water) than plants that live in a rain forest (large plants, large leaf structure, protective mechanisms). Animals that occupy cold environments are very different from animals that live in a desert. Animals in cold regions usually have many thick fat layers and thick fur, whereas, animals in the desert would not have these physical characteristics.
Standard:	S6b: explores the life cycles of organisms.
Components:	S6b.1: All organisms have life cycles. S6b.2: Plants and animals have different life cycles. Plants may begin as seeds and develop into flowers, grasses, shrubs, and trees. Different animals have different ways (e.g., metamorphosis, live birth, egg layers) to undergo growth and development.
Standard:	S6c: identifies the physical characteristics an organism needs to adapt to changes in their environment.

Component:	S6c.1: Plants and animals have many ways to adapt to environmental changes. Plants have modified roots, stems, leaves, and seeds. Animals can develop fat layers or increase thickness of fur.
Strand:	
S7 Earth and Space Sciences	The student demonstrates an understanding of Earth materials, objects in the sky, and changes in Earth and sky; that is, the student:
Standard:	S7a: compares, classifies, and describes the properties of rocks, soil, and water.
Components:	S7a.1: Rocks can be classified by color, texture, and composition. S7a.2: Soils can be classified by color, texture, capacity to retain water, and ability to support the growth of many kinds of plants. S7a.3: Water can be a liquid or a solid and can go back and forth from one form to the other. If water is turned into ice and then the ice is allowed to melt, the amount of water is the same as it was before freezing.
Standard:	S7b: describes factors that contribute to weather and its changes (e.g., temperature, wind, precipitation).
Components:	S7b.1: Weather changes from day to day and over longer periods of time. S7b.2: The sun warms land, air and water. S7b.2: Weather is impacted by geographic location, time of day/year, (i.e., difference in heating of the Earth's surface), and the amount of available water.
Standard:	S7c: compares and explains changes in the Earth and sky.
Components:	S7c.1: Change is something that happens to many things. Some changes are cyclical (e.g., seasons, day and night), predictable (e.g., growth & decay), less consistent (e.g., weather), rapid (e.g., movement of water in a stream), and gradual (e.g., soil erosion, change of seasons). S7c.2: The sun can be seen only in the daytime, but the moon can be seen sometimes at night and sometimes during the day. The sun, moon, and stars all appear to move slowly across the sky.