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Science: Kindergarten

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Strand:

**S1 Scientific Inquiry**

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

Standards:

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

Strand:

**S2 History and Nature of Science**

The student develops an awareness of science as a human endeavor; that is, the student:

Standards:

- S2a:** demonstrates curiosity and initiative during active play and explorations.
- S2b:** recognizes that in science people work alone or as a team to share ideas and findings.
- S2c:** recognizes the use of science and technology in their everyday lives.

Strand:

**S3 Science in Personal and Social Perspectives**

The student develops an understanding of safety and types of resources as it relates to their immediate environment; that is, the student:

Standards:

- S3a:** demonstrates personal and group safety when engaged in science.
- S3b:** describes the various resources in their environment.
- S3c:** practices conservation of resources.

Strand:

**S4 Science and Technology**

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

Standards:

- S4a:** recognizes that tools and technology can be used to observe, measure, and construct things.
- S4b:** explains how tools and technology are used at home and school.
- S4c:** identifies ways that tools and technology are used to make our lives easier.

Strand:	
<b>S5 Physical Science</b>	The student develops an understanding of matter, motion, and energy; that is, the student:
Standard:	<b>S5a:</b> classifies objects according to observable properties.
Component:	<b>S5a.1:</b> Objects can be described in terms of the materials they are made of (i.e., clay, cloth, paper, etc.) and their observable properties (e.g., color, size, shape, weight, texture, flexibility, temperature).
Standard:	<b>S5b:</b> explores and explains how physical properties may affect the motion of objects.
Components:	<b>S5b.1:</b> Motion involves moving from one place to another. <b>S5b.2:</b> A force is needed to make something move or stop moving. <b>S5b.3:</b> We use pushes and pulls to change the motion of objects. <b>S5b.4:</b> An object with a smooth surface will more easily move than one with a rough surface. <b>S5b.5:</b> A round object will more easily move than one that is not round.
Standard:	<b>S5c:</b> describes observable properties of light, heat, and magnets.
Components:	<b>S5c.1:</b> Light travels in a straight line. <b>S5c.2:</b> When objects block the light, they make shadows. <b>S5c.3:</b> Heat may or may not change an object. The amount of change is related to the amount of heat. Temperature is a measurement of heat. <b>S5c.4:</b> Magnets attract and repel each other and certain kinds of other materials.
Strand:	
<b>S6 Life Science</b>	The student develops an understanding of the characteristics of organisms, their life cycles, and their environments; that is, the student:
Standard:	<b>S6a:</b> observes the physical characteristics of plants and animals in their environment.
Component:	<b>S6a.1:</b> Plants have roots, leaves, a trunk, and branches. Animals may have a body covering of hair (fur), scales, feathers, chitin or a shell. Different animals have different characteristics based upon what they need to survive. For example, different birds have different types and sizes of beaks depending on what they eat and how they defend themselves.
Standard:	<b>S6b:</b> compares growth and change in living organisms.
Component:	<b>S6b.1:</b> Living organisms undergo many changes as they grow. As the organism grows, these changes cause the organism to increase in size, shape, weight, and physical appearance.
Standard:	<b>S6c:</b> develops respect, care, and sensitivity to the needs of living organisms in the environment.
Component:	<b>S6c.1</b> The care and handling of organisms must follow accepted procedures.
Strand:	
<b>S7 Earth and Space Sciences</b>	The student develops an understanding of Earth materials, objects in the sky, and changes in Earth and sky; that is, the student:
Standard:	<b>S7a:</b> identifies and describes simple properties of rock, soil, and water.

- Components: **S7a.1:** Rock comes in many sizes, shapes, colors, and textures.  
**S7a.2:** Water can be a liquid or a solid (ice) and can be made to go back and forth from one form to another. If left in an open container it disappears, but water in a closed container does not disappear.  
**S7a.3:** Soil varies in color, texture, and reaction to water.
- Standard: **S7b:** identifies and describes different types of weather.
- Components: **S7b.1:** Weather generally changes some from day to day.  
**S7b.2:** Weather varies according to geographic location.  
**S7b.3:** Types of weather include clear, cloudy, and stormy.
- Standard: **S7c:** identifies and describes features of objects in the sky (e.g., sun, moon, and stars).
- Components: **S7c.1:** The sun, moon, and stars all appear to move slowly across the sky.  
**S7c.2:** The moon appears to change its shape, but looks the same again about every four weeks. The “light” from the moon is a reflection of the sun’s light off its surfaces.  
**S7c.3:** Stars emit their own light. The sun is a star and provides light to Earth and other objects in the sky.  
**S7c.4:** The sun can only be seen in the daytime but the moon can be seen sometimes at night and sometimes in the day.