
**Science Standards
Grades PK**

Strand:

S1 Scientific Inquiry: The student begins to develop abilities necessary to do scientific inquiry and to explore through scientific inquiry; that is, the student:

Standards:

S1a: asks questions about objects, organisms, and events.

S1b: uses observations to make simple predictions.

S1c: conducts simple explorations and investigations.

Components:

S1c1. discusses and identifies questions to pursue and predictions to confirm or disprove

S1c2. uses senses to observe, describe, and collect data

S1c3. uses simple hand tools such as hand lenses and measuring devices to make observations and collect data

S1c4. adds data to class charts and graphs

S1c5. records work by drawing, dictating, and contributing to documentation panels

Standards:

S1d: identifies a pattern or relationship based on observations

S1e: compares objects based on observable characteristics

S1f: sorts and categorizes objects based on observable characteristics.

S1g: communicates about scientific explorations through discussions with peers and through drawing, dictation, and class or group documentation panels.

S1h: learns to use safe practices while doing science.

Components:

S1h1. demonstrates appropriate use of all tools

S1h2. washes hands after relevant explorations

Strand:

S2 History and Nature of Science: The student begins to develop an awareness of science as a human endeavor; that is, the student:

Standards:

S2a: realizes that many people do science

S2b: expresses that science involves asking questions about the natural world and investigating to find out.

S2c: recognizes that in science people share ideas and findings

S2d: Identifies self as someone who does science

Strand:

S3 Personal & Social Perspectives: The student begins to develop an awareness of safety and types of resources as it relates to the immediate environment; that is, the student:

Standards:

S3a: describes how some basic resources found in their environment, such as water, trees, can be used for different purposes.

Strand:

S4 Science and Technology: The student begins to develop an understanding about science and technology; that is, the student:

Standards:

S4a: identifies and finds a solution for a simple problem.

S4b: recognizes that things found in nature are different from those that are made by humans.

Strand:

S5 Physical Science: The student begins to develop an understanding of matter, motion and energy; that is, the student:

Standards:

S5a: Explores, and describes physical properties of simple material and objects.

Components:

S5a1. observes and describes objects used for out door and classroom activities (e.g., blocks, collage materials, collections) in terms of observable physical properties (e.g., shape, size, color and texture) and behaviors (rolls, bounces,)

S5a2. observes and describes materials used in outdoor and classroom activities (e.g., water, sand, paint) in terms of observable physical properties (color, texture, hardness) and simple behaviors (e.g., water flows, clay squishes, wet sand sticks to itself.)

S5a3. explores and demonstrates how simple objects and materials change (e.g., mixing paints to change color; cutting paper to make small pieces; adding water to sand to make it sticky; leaving play dough to harden.).

Standards:

S5b: explores how objects and materials move.

Components:

S5b1. observes and explores moving objects and materials outdoors and in daily classroom activity (e.g., balls rolling, blocks sliding, streamers waving; water and sand flowing)

S5b2. investigates and compares movement caused by different forces (e.g., wind blowing streamers and bubble; gravity pulling blocks, balls, cars down; physical energy making trucks go).

Standards:

S5c: explores and describes observable properties of light and sound.

Components:

S5c1: explores and describes observable properties of light and sound.

S5c2. explores shadows indoors and out identifying light source and the object casting the shadow

S5c3. investigates how the shape and size of shadows change

S5c4. explores and compares different sounds by playing simple instruments (e.g., homemade drums and shakers; guitar; recorder), and using own bodies and voices

S5c5. Describes sounds as high or low; loud or soft

S5c6. Observes beams of light from different light sources (e.g. flashlight, sunlight)

Strand:

S6 Life Science: The student begins to develop an understanding of the characteristics of organisms, their life cycles, and their environments; that is, the student:

Standards: S6a: observes and describes observable characteristics and behaviors of organisms in the local environment

Components:

S6a1. gives examples of living and non-living things

S6a2. describes external body parts and features of self and other familiar animals

S6a3. describes observable behaviors of self and other animals (e.g., eating, moving, sleeping)

S6a4. observes and describes familiar plants and their basic parts (e.g., root, stem, leaf, flower, fruit)

S6a5. identifies basic needs of living things (water, food, shelter).

Standards:

S6b: observes and describes changes in self and other living things over time

Components:

S6b1. investigates growth of plants in the classroom

S6b2. observes and describes changes in plants in the local environment

S6b3. observes and records changes in self (teeth, height)

Standards:

S6c: describes how a variety of living things meet their needs in the local environment.

Components:

S6c1. explores local environment for living things

S6c2. observes several animals and identifies how they meet some of their needs (food, water, shelter)

S6c3. notices where different kinds of plants grow

S6c4. develops awareness of basic relationships among plants and animals (some animals eat plants; some plants provide homes for animals).

Strand:

S7 Earth & Space Sciences: The student begins to develop an understanding of Earth materials, objects in the sky, and changes in Earth and sky; that is, the student:

Standards: S7a: observes and describes observable properties of familiar earth materials

Components:

S7a1. describes and sorts by physical properties samples of rocks collected from local environment

S7a2. explores samples of soils and/or sand from local environment

S7a3. investigates water outdoors (e.g., puddles, drops, streams) and changes of water puddles evaporate, stream flows)

Standards:

S7b: observes, describes, and records basic elements of local weather (temperature, cloud cover, wind, and precipitation).

Components:

S7b1. describes daily weather conditions regularly

S7b2. compares weather conditions from day to day

S7b3. recognizes some of the effects of weather on the environment (puddles, dust, wind blown objects) and on daily life. (e.g., clothing, whether recess is outdoors).

Standards:

S7c: observes and describes familiar objects in the sky.

Components:

S7c1. identifies Sun, moon, stars, and clouds as objects in the sky

S7c2. can describe some of the different apparent shapes of the moon.

S7c3. recognizes that the moon does not always appear to be the same

S7c4. is aware that the Sun and moon are not always in the same part of the sky.