

Kinder/1st/2nd Grade Essential Standards Science

Based on State Key Content Standards compiled by the Pulliam Group

Strand	Standard Kinder	Standard 1 st Grade	Standard 2 nd Grade
Physical Science	<p>1. Properties of materials can be observed, measured and predicted.</p> <p>a. Students know that objects can be described in terms of the materials they are made of (e.g. clay, cloth, paper) and their physical properties (e.g., color, size, shape, weight, texture, flexibility, attraction to magnets, floating, sinking).</p> <p>b. Students know that water can be a liquid or a solid and can be made to change back and forth from one form to the other.</p>	<p>a. Students know that solids, liquids, and gases have different properties.</p>	<p>1. The motion of objects can be observed and measured.</p> <p>a. Students know that the position of an object can be described by locating it in relation to another object or to the background.</p> <p>b. Students know that an object's motion can be described by recording a change in position of the object over time.</p> <p>c. Students know that the way to change how something is moving, or the amount of force, of the push or pull.</p>
Life Science	<p>2. Different types of plants and animals inhabit the earth.</p> <p>a. Students know how to observe and describe similarities and differences in the appearance and behavior of plants and animals (e.g., seed-bearing plants, birds, fish, insects).</p> <p>b. Students know that stories sometimes give plants and animals attributes they do not really have.</p>	<p>2. Plants and animals meet their needs in different ways.</p> <p>b. Students know that both plants and animals need water, animals need food, and plants need light.</p> <p>c. Students know that animals eat plants or other animals for food and may also use plants or even other animals for shelter and nesting.</p>	<p>2. Plants and animals have predictable life cycles.</p> <p>a. Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another.</p> <p>b. Students know that the sequential stages of life cycles are different for different animals, such as butterflies, frogs, and mice.</p> <p>e. Students know that light, gravity, touch, or environmental stress can affect the germination, growth and development of plants.</p>
Earth Science	<p>3. Earth is composed of land, air, and water.</p> <p>a. Students know the characteristics of mountains, rivers, oceans, valleys, deserts, and local landforms.</p> <p>b. Students know that changes in weather occur from day to day and across seasons, affecting Earth and its inhabitants.</p>	<p>3. Weather can be observed, measured, and described.</p> <p>a. Students know how to use simple tools (e.g., thermometer, wind vane) to measure weather conditions and record changes from day to day and across the seasons.</p> <p>b. Students know that the weather changes from day to day, but that trends in temperature or rain tend to be predictable during a season.</p>	<p>3. Earth is made of materials that have distinct properties that provide resources for human activities.</p> <p>a. Students know how to compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals.</p> <p>c. Students know that soil is made partly from weathered rock and partly from organic materials and that soils differ in their color, texture, capacity to retain water and ability to support the growth of many kinds of plants.</p>
Investigations and Experimentation	<p>a. Students will observe common objects by using the five senses.</p> <p>d. Students will compare and sort common objects by one physical attribute (e.g., color, shape, texture, size, weight).</p>	<p>a. Students will draw pictures that portray some features of the thing being described.</p> <p>d. Students will describe the relative position of objects by using two references (e.g. above and next to, below and left of).</p>	<p>b. Students will measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in metric system units.</p> <p>c. Students will compare and sort common objects according to two or more physical attributes (e.g., color, shape, texture, size, weight).</p> <p>f. Students will use magnifiers or microscopes to observe and draw descriptions of small objects.</p> <p>g. Students will follow oral instructions for a scientific investigation.</p>

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