

**1<sup>st</sup> / 2<sup>nd</sup> / 3<sup>rd</sup> Grade**  
**Essential Standards**  
**Science**

Based on State Key Content Standards compiled by the Pulliam Group

<b>Strand</b>	<b>Standard 1<sup>st</sup> Grade</b>	<b>Standard 2<sup>nd</sup> Grade</b>	<b>Standard 3<sup>rd</sup> Grade</b>
Physical Science	a. Students know that solids, liquids, and gases have different properties.	1. The motion of objects can be observed and measured. a. Students know that the position of an object can be described by locating it in relation to another object or to the background. b. Students know that an object's motion can be described by recording a change in position of the object over time. c. Students know that the way to change how something is moving, or the amount of force, of the push or pull.	1. Energy and matter have multiple forms and can be changed from one form to another. a. Students know that energy comes from the Sun to Earth in the form of light. b. Students know that sources of stored energy take many forms, such as food, fuel, and batteries. d. Students know that energy can be carried from one place to another by waves, such as water waves and sound waves, by electric current, and by moving objects. e. Students know that matter has three forms: solid, liquid, and gas. f. Students know that evaporation and melting are changes that occur when the objects are heated. 2. Light has a source and travels in a direction. a. Students know that sunlight can be blocked to create shadows. b. Students know that light is reflected from mirrors and other surfaces. d. Students know that an object is seen when light traveling from the object enters the eye.
Life Science	2. Plants and animals meet their needs in different ways. b. Students know that both plants and animals need water, animals need food, and plants need light. 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.	2. Plants and animals have predictable life cycles. a. Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another. b. Students know that the sequential stages of life cycles are different for different animals, such as butterflies, frogs, and mice. e. Students know that light, gravity, touch, or environmental stress can affect the germination, growth and development of plants.	3. Adaptations in physical structure or behavior may improve an organism's chance for survival. a. Students know that plants and animals have structures that serve different functions in growth, survival, and reproduction. b. Students know examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands. d. Students know that when the environment changes, some plants and animals survive and reproduce; others die or move to new locations.
Earth Science	3. Weather can be observed, measured, and described. 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. 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.	3. Earth is made of materials that have distinct properties that provide resources for human activities. 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. c. Students know that soil is made partly from weathered rock and partly from organic materials and those soils differ in their color, texture, capacity to retain water and ability to support the growth of many kinds of plants.	4. Objects in the sky move in regular and predictable patterns. a. Students know that the patterns of stars stay the same, although they appear to move across the sky nightly, and different stars can be seen in different seasons. b. Students know the way in which the Moon's appearance changes during the four-week lunar cycle. d. Students know that Earth is one of several planets that orbit the Sun and that the Moon orbits the Earth. e. Students know that the position of the Sun in the sky changes during the course of the day and from

			season to season.
Investigations and Experimentation	<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>	<p>d. Students will predict the outcome of a simple investigation and compare the result with the prediction.</p> <p>e. Students will collect data in an investigation and analyze those data to develop a logical conclusion.</p>