

**SCIENCE CURRICULUM STANDARDS GRADES 3-5**

11/13/09

Grade 3	Grade 4	Grade 5
<p><b>Life Science</b></p> <ul style="list-style-type: none"> <li>• LS2 Identify structures in plants that are responsible for food production, support, water transport, reproduction, growth, and protection</li> <li>• LS3 Describe predictable life cycles of plants</li> <li>• LS11 Describe the role of producers, consumers, and the food chain</li> </ul> <p><b>Physical Science</b></p> <ul style="list-style-type: none"> <li>• PS4 Identify the basic forms of energy</li> <li>• PS5 Explain how energy can be transformed from one form to another</li> <li>• PS6 Understand that electricity in circuits requires a complete loop for an electrical current and can produce light, heat and sound.</li> <li>• PS7 Understand objects and materials can be conductors or insulators of electricity</li> <li>• PS8 Create and use an electromagnet</li> <li>• PS9 Demonstrate magnets have poles that repel and attract each other</li> <li>• PS10 Demonstrate a magnet will attract some objects and materials but not others</li> </ul>	<p><b>Life Science</b></p> <ul style="list-style-type: none"> <li>• LS3 Describe predictable life cycles of animals</li> <li>• LS4 Explain major life cycle stages of the frog and butterfly</li> <li>• LS6 Explain how characteristics may change over time as adaptations</li> <li>• LS9 Recognize plants have characteristic behaviors, and plants and animals can survive via seasonal behaviors (with T/E 2.4 Compare natural systems with mechanical systems that are designed to serve similar purposes)</li> </ul> <p><b>Physical Science</b></p> <ul style="list-style-type: none"> <li>• PS1 Identify properties of objects and materials</li> </ul>	<p><b>Life Science</b></p> <ul style="list-style-type: none"> <li>• LS1 Describe characteristics of plants and animals and how they are classified</li> <li>• LS5 Describe types of reproduction and how traits are inherited</li> <li>• LS7 Explain how living things adapt to their environment causing them to die or move to new locations</li> <li>• LS8 Recognize that organisms meet needs by using behaviors in response to information from the environment, and some behaviors are instinctive and others are learned</li> <li>• LS9 Recognize plants have characteristic behaviors, and plants and animals can survive via seasonal behaviors</li> <li>• LS10 Explain how ecosystems function</li> </ul> <p><b>Physical Science</b></p> <ul style="list-style-type: none"> <li>• PS1 Identify properties of objects and materials</li> <li>• PS2 Explain how matter is classified</li> <li>• PS3 Explain how the state of water can change by adding or taking away heat</li> <li>• PS4 Identify the basic forms of energy</li> <li>• PS5 Explain how energy can be transformed from one form to another</li> <li>• PS12 Understand light travels in a straight line until it is reflected, refracted or absorbed</li> </ul>

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<p><b>Earth Science</b></p> <ul style="list-style-type: none"> <li>• ES13 Understand Earth is part of the Solar System (planets, Earth’s axis, revolution, rotation and four phases of the moon)</li> <li>• ES 14 Understand how Earth orbits the sun in a year’s time and rotates on its axis in approximately 24 hours. The rotation of the earth, day/night, and apparent movements of the sun, moon and stars are connected.</li> <li>• ES15 Recognize observable changes in the moon</li> </ul>	<p><b>Earth Science</b></p> <ul style="list-style-type: none"> <li>• ES1 Describe what a mineral is</li> <li>• ES2 Identify the physical properties of minerals and test for those (with T/E 1.1 Describe materials used to accomplish a design task)</li> <li>• ES3 Compare and contrast the formation of the three types of rock (metamorphic, igneous, and sedimentary)</li> <li>• ES4 Understand how soil is formed</li> <li>• ES5 Understand the properties of soil and how it supports the growth of plants</li> <li>• ES12 Understand that slow (erosion and weathering) and rapid (extreme weather) processes shape the earth</li> </ul> <p><b>Technology/Engineering</b></p> <ul style="list-style-type: none"> <li>• T/E 1.3 Compare and contrast the differences between simple and complex machines</li> </ul>	<p><b>Earth Science</b></p> <ul style="list-style-type: none"> <li>• ES6 Describe how air temperature, moisture, wind speed and direction, and precipitation make up the weather at a particular place</li> <li>• ES7 Explain how various forms of precipitation are connected to the weather in a particular place and time</li> <li>• ES8 Identify how global patterns influence local weather, which can be measured</li> <li>• ES9 Differentiate between climate and weather</li> <li>• ES10 Describe how the water on Earth cycles in different forms and locations</li> <li>• ES11 List and explain factors that affect climate</li> <li>• ES12 Describe processes that shape the earth</li> </ul> <p><b>Technology/Engineering</b></p> <ul style="list-style-type: none"> <li>• T/E 1.2 Construct a prototype using materials and tools</li> </ul>