

Big Idea	Standard	Breakdown
1. The Nature of Science	SC.2.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations. (High)	<ul style="list-style-type: none"> <li>Identify inquiry skills.</li> <li>Ask and raise questions about the world and investigate them by observing.</li> <li>Explain the difference between what you observe and what you think.</li> <li>Identify science tools used for observing and measuring.</li> <li>Ask and raise questions about the world around me.</li> <li>Communicate findings and ask new questions based on the findings of an investigation.</li> </ul>
	SC.2.N.1.2 Compare the observations made by different groups using the same tools. (Moderate)	<ul style="list-style-type: none"> <li>Organize and analyze data, communicate the findings, and ask new questions based on the findings of an investigation.</li> <li>I can identify and demonstrate scientific methods and processes and explain that similar results should occur when investigations are repeated.</li> </ul>
	SC.2.N.1.3 Ask "how do you know?" in appropriate situations and attempt reasonable answers when asked the same question by others. (High)	<ul style="list-style-type: none"> <li>Ask and raise questions about the world and investigate them by observing and then explain that similar results should occur when investigations are repeated.</li> </ul>
	SC.2.N.1.4 Explain how particular scientific investigations should yield similar conclusions when repeated. (High)	<ul style="list-style-type: none"> <li>Draw a design of a model to help solve a problem.</li> <li>Communicate how a model works.</li> </ul>
	SC.2.N.1.5 Distinguish between empirical observation (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think). (Moderate)	<ul style="list-style-type: none"> <li>Draw a design and build a model.</li> </ul>
	SC.2.N.1.6 Explain how scientists alone or in groups are always investigating new ways to solve problems. (Moderate)	<ul style="list-style-type: none"> <li>Solve a problem and communicate the success of a model.</li> </ul>
8. Properties of Matter	SC.2.P.8.1 Observe and measure objects in terms of their properties, including size, shape, color, and temperature, and weight, texture, sinking or floating in water, and attraction and repulsion of magnets. (Low)	<ul style="list-style-type: none"> <li>Identify and describe properties of matter.</li> <li>Identify tools that are used to measure objects.</li> <li>Measure objects using the appropriate tools.</li> <li>Order a group of objects by length and then by weight.</li> <li>Compare the order of two groups of objects that I measured.</li> <li>Compare my data with the data of classmates.</li> </ul>

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## Break Down of Standards

8. Properties of Matter	SC.2.P.8.2 Identify objects and materials as solid, liquid, or gas. (Low)	<ul style="list-style-type: none"> <li>Identify solids, liquids, and gases.</li> <li>Describe and compare the properties of solids, liquids, and gases.</li> <li>Identify solids, liquids and gases and compare their properties.</li> </ul>
	SC.2.P.8.3 Recognize that solids have a definite shape and that liquids and gases take the shape of their container. (Low)	<ul style="list-style-type: none"> <li>Explain that all objects and substances are made of matter and matter has two properties: it takes up space and has mass.</li> </ul>
	SC.2.P.8.6 Measure and compare the volume of liquids using containers of various shapes and sizes. (Moderate)	<ul style="list-style-type: none"> <li>Measure and compare the volumes of liquids.</li> <li>Communicate the results of an investigation.</li> </ul>
8. Properties of Matter	SC.2.P.8.4 Observe and describe water in its solid, liquid, and gaseous states. (Low)	<ul style="list-style-type: none"> <li>Identify water in each of the three states of matter.</li> </ul>
	SC.2.P.8.5 Measure and compare temperatures taken every day at the same time. (See Big Idea 7, this should be taught/reviewed along with SC.2.E.7.1) (Moderate)	<ul style="list-style-type: none"> <li>Measure and compare temperatures.</li> </ul>
9. Changes in Matter	SC.2.P.9.1 Investigate that materials can be altered to change some of their properties, but not all materials respond the same way to any one alteration. (High)	<ul style="list-style-type: none"> <li>Describe how cutting, breaking, dissolving, freezing, and melting can change matter.</li> <li>Explain that not all matter responds to change in the same way.</li> <li>Explain how burning and cooking can change the texture, size, color, shape, and taste of different matter.</li> <li>Experiment with dissolving objects to change their properties.</li> <li>Communicate the results of an investigation.</li> <li>Demonstrate that not all objects respond to the same alteration in the same way.</li> </ul>
10. Forms of Energy	SC.2.P.10.1 Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars. (Low)	<ul style="list-style-type: none"> <li>Identify forms and sources of energy.</li> <li>Explain how people use energy in their daily lives.</li> <li>Observe how the sun's energy warms our homes.</li> <li>Communicate the results of an investigation.</li> </ul>

13. Forces and Changes In Motion	<p>SC.2.P.13.1 Investigate the effect of applying various pushes and pulls on different objects. (High)</p>	<ul style="list-style-type: none"> <li>• Explain how forces change motion.</li> <li>• Demonstrate that the amount and direction of force exerted on an object will determine how much and in what direction the object moves.</li> <li>• Explain how objects fall to the ground unless something holds them up.</li> <li>• Classify forces as pushes or pulls.</li> <li>• Classify forces as pushes or pulls and explain how forces change motion.</li> <li>• Explain how objects fall to the ground unless something holds them up and recognize that the amount and direction of a force exerted on an object will determine how much and in what direction the object will move.</li> <li>• Describe what a roller coaster designer does.</li> </ul>
	<p>SC.2.P.13.2 Demonstrate that magnets can be used to make some things move without touching them. (Low)</p>	<ul style="list-style-type: none"> <li>• Observe and demonstrate that magnets can move objects without touching them.</li> <li>• Sort objects based on whether they are attracted by a magnet.</li> <li>• Demonstrate that magnets can be used to make some things move without touching them.</li> </ul>
	<p>SC.2.P.13.3 Recognize that objects are pulled toward the ground unless something holds them up. (Low)</p>	<ul style="list-style-type: none"> <li>• Classify forces as pushes or pulls and explain how forces change motion.</li> <li>• Explain how objects fall to the ground unless something holds them up.</li> </ul>
	<p>SC.2.P.13.4 Demonstrate that the greater the force (push or pull) applied to an object, the greater the change in motion of the object. (Moderate)</p>	<ul style="list-style-type: none"> <li>• Experiment with forces by varying the amount of force used to push an object.</li> <li>• Communicate the results of an investigation.</li> </ul>
6. Earth Structures	<p>SC.2.E.6.1 Recognize that Earth is made up of rocks. Rocks come in many sizes and shapes. (Moderate)</p>	<ul style="list-style-type: none"> <li>• Recognize that Earth is made of rocks.</li> <li>• Explain how rocks are used by people.</li> <li>• Compare rocks of different sizes, shapes, and colors.</li> <li>• Recognize that rocks are made of minerals.</li> <li>• Identify and sort rocks based on physical properties such as size, shape, and color.</li> <li>• Explain ways that rocks are used.</li> </ul>
	<p>SC.2.E.6.2 Describe how small pieces of rock and dead plant and animal parts can be the basis of soil and explain the process by which soil is formed. (High)</p>	<p>Explain how soil is formed.</p> <ul style="list-style-type: none"> <li>• Identify the parts that make up soil.</li> <li>• Classify different types of soil based on their properties.</li> </ul>

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	<p>SC.2.E.6.3 Classify soil types based on color, texture (size of particles), the ability to retain water, and the ability to support the growth of plants. (High)</p>	<ul style="list-style-type: none"> <li>Classify different types of soil based on their properties.</li> <li>Identify which soil is best for growing plants.</li> </ul>
<p>7. Earths Systems and Patterns</p>	<p>SC.2.E.7.1 Compare and describe changing patterns in nature that repeat themselves, such as weather conditions including temperature and precipitation, day to day and season to season. (Moderate)</p>	<ul style="list-style-type: none"> <li>Explain that air is all around us and that moving air is called wind.</li> <li>Observe, measure, and describe how weather changes over time.</li> <li>Identify tools used to measure and predict the weather.</li> <li>Explain the water cycle.</li> <li>Observe, measure, and predict the weather. Describe and compare patterns in weather from day to day and from season to season.</li> </ul>
	<p>SC.2.E.7.2 Investigate by observing and measuring, that the Sun's energy directly and indirectly warms the water, land, and air. (High)</p>	<ul style="list-style-type: none"> <li>Measure temperature using a thermometer and demonstrate how heat energy from sun warms the water, the land, and the air.</li> </ul>
	<p>SC.2.E.7.3 Investigate, observe and describe how water left in an open container disappears (evaporates), but water in a closed container does not disappear (evaporate). (High)</p>	<ul style="list-style-type: none"> <li>Demonstrate that water left in an open container evaporates.</li> <li>Measure volume using a measuring cup.</li> </ul>
	<p>SC.2.E.7.4 Investigate that air is all around us and that moving air is wind. (High)</p>	<ul style="list-style-type: none"> <li>Explain that air and water are always moving, and this motion causes changing conditions that can be observed over time.</li> </ul>
	<p>SC.2.E.7.5 State the importance of preparing for severe weather, lightning, and other weather related events. (Low)</p>	<ul style="list-style-type: none"> <li>Identify kinds of severe weather events.</li> <li>Explain how scientists help people stay safe from severe weather situations.</li> <li>Describe how people prepare for severe weather.</li> </ul>

16. Heredity and Reproduction	<p>SC.2.L.16.1 Observe and describe major stages in the life cycles of plants and animals, including beans and butterflies. (Moderate)</p>	<ul style="list-style-type: none"> <li>• Define the term life cycle and explain that different animals have different life cycles.</li> <li>• Explain that all life cycles include birth/hatching, growth and development, maturity, and reproduction.</li> <li>• Identify animals, such as frogs, that undergo complete metamorphosis during their life cycles.</li> <li>• Describe the sequence of the stages of the frog life cycle.</li> <li>• Explain that all life cycles include birth/hatching, growth and development, maturity, and reproduction.</li> <li>• Describe the sequence of the stages of the mammal life cycle.</li> <li>• Examine a bean plant using a hand lens and observe and describe the life cycle of a bean plant.</li> <li>• Observe and describe the life cycle of a bean plant and compare observations made over time.</li> <li>• Recognize that all plants have life cycles.</li> <li>• Compare the rates at which different plants grow and mature.</li> <li>• Explain that many plants begin life as a seed.</li> <li>• Distinguish between plants that make seeds from flowers and plants that make seeds from cones.</li> </ul>
17. Interdependence	<p>SC.2.L.17.1 Compare and contrast the basic needs that all living things, including humans, have for survival. (Moderate)</p>	<ul style="list-style-type: none"> <li>• Identify sunlight, air, water, nutrients, and space as the basic needs of plants.</li> <li>• Explain that a living thing must meet its basic needs in order to survive.</li> <li>• Identify air, water, food, shelter, and space as the basic needs of animals and humans, and explain that if its basic needs are not met, a living thing will die.</li> <li>• Compare and contrast the basic needs of plants and animals, and describe some ways in which animals depend on plants to meet their basic needs.</li> </ul>
	<p>SC.2.L.17.2 Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs. (Moderate)</p>	<ul style="list-style-type: none"> <li>• Demonstrate that plants live where their needs are met.</li> <li>• Recognize and explain that living things are found just about everywhere on Earth, and define an environment as everything that surrounds a living thing, including other living and nonliving things.</li> <li>• Recognize and explain that living things are best suited to live in certain habitats, and explain that different kinds of living things are found in different places on Earth.</li> </ul>
14. Organization and development of Living Organisms	<p>SC.2.L.14.1 Distinguish human body parts (brain, heart, lungs, stomach, muscles, and skeleton) and their basic functions. (Moderate)</p>	<ul style="list-style-type: none"> <li>• Identify where major human body parts are located in the body.</li> <li>• Describe the functions of the brain (controlling the body), and the stomach (breaking down food).</li> <li>• Describe the functions of the muscles (moving the body) and the skeleton (supporting the body and protecting vital organs).</li> <li>• Describe the functions of the heart (pumping blood through the body) and the lungs (obtaining oxygen for the body).</li> <li>• Describe the function of the heart (pumping blood through the body).</li> <li>• Identify and compare the heart rate while resting and after activity.</li> </ul>

