

	Content Statement	I Can...	Key Vocabulary
Sun, Energy, and Weather (ESS)	<p>1. The sun is the principal source of energy.</p> <p>NOTE: Appropriate tools and technology must be used to collect, compare and document data. Investigation and experimentation must be combined with explanation, questioning and discussion of the results and findings.</p>	<p>-Observe, measure and record the warming and cooling of air, water or soil.</p> <p>-Expose an object or material (including water) to sunlight and measure the time it takes for the temperature to change.</p> <p>-Remove an object or material from sunlight and measure the time it takes for it to cool down.</p> <p>-Compare the amount of time an object is exposed to sunlight with the change in its temperature.</p> <p>-Recognize that sunlight warms water, air, and soil.</p> <p>-Identify the sun as a primary source of energy.</p>	<ul style="list-style-type: none"> • Sun • Temperature • Air • Material • Soil • Water • Energy • Measure • Observe • Record • Object
	<p>2. The physical properties of water can change.</p> <p>NOTE: Water as a vapor is not introduced until grade 2; only solid and liquid water should be discussed at this level.</p>	<p>-Identify the different areas where water can be observed (lakes, rivers, streams, ponds, wetlands, oceans, rain, snow, sleet, hail, fog).</p> <p>-Recall that heating and freezing water changes it from a solid to a liquid and a liquid to a solid.</p> <p>-Explain how water changes from a solid to a liquid or a liquid to a solid.</p> <p>-Observe water in the air as clouds, steam or fog.</p> <p>-Differentiate between ocean water and fresh water.</p> <p>-Discuss the abundance of water around the world and why it is important to learn about it.</p> <p>-Use appropriate tools to test and measure water’s weight, texture, temperature, or size to compare its physical properties (e.g., compare measurements of water before and after freezing, examine the texture of snow or ice crystals using a hand lens).</p> <p>-Describe how water can change the shape of the land (e.g., moving soil or sand along the banks of a river or at a beach).</p>	<ul style="list-style-type: none"> • Solid • Liquid • Physical properties • Water • Observe • Clouds • Steam • Fog • Ocean water • Fresh water • Measure • Weight • Texture • Temperature • Size

For further explanation and details visit the “Science Revised Academic Content Standards (2010) and Model Curriculum Development” on the ODE website.

	Content Statement	I Can...	Key Vocabulary
Basic Needs of Living Things (LS)	<p>3. Living things have basic needs, which are met by obtaining materials from the physical environment.</p>	<p>-Identify the difference in how plants and animals get energy. -Identify the basic survival needs of plants and animals. -Investigate the ways that different living things meet their basic needs for survival by obtaining necessary materials from the environment (correct temperature, amount of water, amount of sunlight and food sources available, etc.). -Observe living things using energy from their physical environments.</p>	<ul style="list-style-type: none"> • Basic needs • Environment • Energy • Living things • Survival • Materials
	<p>4. Living things survive only in environments that meet their needs.</p> <p>NOTE: The focus at this grade level is on macroscopic interactions and needs of common living things (plants and animals).</p>	<p>-Explore how the amount and distribution of the basic needs (animals: food, water, cover and space; plants: room to grow, air, water, temperature range, light, nutrients, and length of growing season) will influence the types of animals and plants that can survive in an area. -Describe many sources of food and water in an animal’s habitat. -Explain the different reasons that animals need shelter and space. -Observe how changes in the seasons can affect the availability of different resources which impacts the living things that grow in certain environments. -Match plants and animals with the environments that they would be found.</p>	<ul style="list-style-type: none"> • Shelter • Space • Habitat • Living things • Environments • Basic needs • Seasons • Resources

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	Content Statement	I Can...	Key Vocabulary
Motion and Materials (PS)	<p>5. Properties of objects and materials can change.</p> <p>NOTE: Emphasis is placed on observations. Concepts of thermal energy, atoms and heat transfer are inappropriate at this grade. Also students will not be assessed on the differences between mass and weight until Grade 6.</p>	<p>-Recognize various types of changes that objects or materials can go through to change observable properties (e.g., heating, tearing, mixing, taking apart, freezing, melting, etc.).</p> <p>-Observe how properties of a material can change when exposed to different conditions (e.g., heating/cooling changes materials from liquids to solids).</p> <p>-Recognize that not all materials respond in the same way and not all properties of a material may change under different conditions.</p> <p>-Investigate the idea that the amount of a liquid or solid stays the same when heated/cooled.</p> <p>-Experiment with objects to discover how they have specific properties that allow them to work with other parts and carry out a particular function.</p> <p>-Investigate how something may not work well or at all if a part is missing, broken, worn out, mismatched, or misconnected.</p>	<ul style="list-style-type: none"> • Properties • Solid • Liquid • Objects • Materials • Observable properties • Investigate • Experiment
	<p>6. Objects can be moved in a variety of ways, such as straight, zigzag, circular and back and forth.</p> <p>NOTE: Changes in motion are a result of changes in energy.</p> <p>NOTE: Force is a push or pull between two objects and energy is the property of an object that can cause changes. A force acting on an object can sometimes result in a change in energy.</p>	<p>Describe the position of an object based on its location to another object (e.g., in front, behind, above, below).</p> <p>-Explore how different objects (ball, pinwheel, kite) can change positions (straight line, circle, back and forth, zigzag).</p> <p>-Understand that objects near Earth fall to the ground unless something holds them up.</p> <p>-Experiment with different ways to change the motion and position of different objects by pushing or pulling the objects (applying a force).</p>	<ul style="list-style-type: none"> • Position • Motion • Force • Objects • Zigzag • In front • Behind • Above • Below • Experiment

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