

## Science Grade 5 Scope & Sequence

Time Frame	Unit	NGSS Standard(s)/Outcome(s)	Essential/Guiding Questions
<p>September Lessons 1 -2</p> <p>March-June Lessons 3-6</p>	<p><b>Earth Systems</b></p>	<p><a href="#">5-ESS2-1.</a> Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. [Clarification Statement: Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system.] [Assessment Boundary: Assessment is limited to the interactions of two systems at a time.]</p> <p><a href="#">5-ESS2-2.</a> Describe and graph the amounts and percentages of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. [Assessment Boundary: Assessment is limited to oceans, lakes, rivers, glaciers, ground water, and polar ice caps, and does not include the atmosphere.]</p> <p><a href="#">5-ESS3-1</a> Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p> <p><a href="#">4-ESS1-1</a> Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.</p>	<ul style="list-style-type: none"> <li>● What are the essential components of the four earth systems?</li> <li>● How do the four major earth systems interact?</li> <li>● How can we model the interactions of the earth systems?</li> <li>● Why is freshwater important and where do humans get it?</li> <li>● How do both freshwater and saltwater systems balance each other?</li> <li>● What are the positive and negative effects on the environment as a result of human activity?</li> </ul>

Oct.-Dec.	<b>Survivor</b>	<p><a href="#">4-LS1-1</a> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.] [Assessment Boundary: Assessment is limited to macroscopic structures within plant and animal systems.]</p> <p><a href="#">4-LS1-2</a> Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. [Clarification Statement: Emphasis is on systems of information transfer. ] [Assessment Boundary: Assessment does not include the mechanisms by which the brain stores and recalls information or the mechanisms of how sensory receptors function.]</p> <p><a href="#">3-5-ETS1-3</a> Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved</p>	<ul style="list-style-type: none"> <li>● What external features do animals have to allow them to survive?</li> <li>● What internal features do animals have to allow them to survive?</li> <li>● What external features do plants have to allow them to survive?</li> <li>● What internal features do plants have to allow them to survive?</li> <li>● How do animals gather and respond to information?</li> </ul>
Dec.-March	<b>Earth and Space</b>	<p><a href="#">5-PS2-1</a> . Support an argument that the gravitational force exerted by Earth on objects is directed down. [Clarification Statement: “Down” is a local description of the direction that points toward the center of the spherical Earth.</p> <p><a href="#">5-ESS1-1</a> . Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. [Assessment Boundary: Assessment is limited to relative distances, not sizes, of stars. Assessment does not include other factors that affect apparent brightness (such as stellar masses, age, and stage)</p> <p><a href="#">5-ESS1-2</a> . Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in</p>	<ul style="list-style-type: none"> <li>● How do scientists use repeating patterns?</li> <li>● How do the properties, location, and movement of celestial objects determine the survival of living things?</li> <li>● How does the distance from Earth affect the apparent brightness of a star?</li> <li>● How does gravity affect objects?</li> <li>● Why is there day and night?</li> <li>● Why are there changes in length and direction of shadows?</li> <li>● What do shadows tell us about the movement of the Earth and sun?</li> <li>● How are scientists able to predict</li> </ul>

		<p>the night sky. [Clarification Statement: Examples of patterns could include the position and motion of Earth with respect to the sun and selected stars that are visible only in particular months.</p> <p><a href="#">ESS1-B</a> The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year.</p>	<p>moon phases and eclipses on a calendar?</p>
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