

**South Conway County School District**  
**6th Grade Science Pacing Guide (2009-2010)**

Arkansas Curriculum Framework (SLE)	Learning Goal (Objective)	Assessment/Bloom's	Essential Vocabulary *teacher word (For Future Use)	Materials/Resources (For Future Use)
<b>First Quarter</b>				
<b>LS.2.6.1</b>	Observe, describe, and illustrate plant and animal <i>tissues</i> : muscle, blood, skin, xylem, phloem	Knowledge		
<b>LS.2.6.2</b>	Illustrate the hierarchical relationships of: cells, tissues, organs	Knowledge		
<b>LS.2.6.3</b>	Investigate the functions of <i>tissues</i>	Analysis		
<b>LS.2.6.4</b>	Model and explain the functions of animal organs: heart, lungs, kidneys, eyes, ears, skin, teeth	Analysis		
<b>LS.2.6.6</b>	Dissect <i>organs</i> , including, but not limited to: heart, eye, lung, stem, root	Application		
<b>LS.2.6.7</b>	Describe the relationship between organ function and the following needs of cells: oxygen, food, water, waste removal	Knowledge		
<b>LS.2.6.5</b>	Model and explain the functions of plant organs: leaves, roots, stems, flowers	Analysis		
<b>LS.2.6.8</b>	Investigate careers, scientists, and historical breakthroughs related to tissues and organs	Analysis		
<b>LS.3.6.1</b>	Describe characteristics of plants and animals manipulated through selective breeding	Knowledge		
<b>LS.3.6.2</b>	Predict the outcome of selective breeding practices over several generations	Comprehension		
<b>LS.4.6.3</b>	Conduct simulations demonstrating natural selection	Synthesis		
<b>LS.4.6.4</b>	Analyze natural selection	Analysis		
<b>LS.3.6.3</b>	Relate the development of Earth's present-day complex species from earlier, distinctly different simpler species	Evaluation		
<b>LS.3.6.4</b>	Investigate careers, scientists, and historical breakthroughs related to adaptations and selective breeding	Analysis		
<b>LS.3.6.8</b>	Investigate careers, scientists, and historical breakthroughs related to learned and innate behaviors	Analysis		
<b>LS.3.6.6</b>	Differentiate between innate behaviors: migration, web spinning, defensive posture, communication, imprinting and learned behaviors: speaking a language, using tools, hunting skills	Analysis		
<b>LS.3.6.5</b>	Describe behavioral adaptations of organisms to the environment: hibernation, estivation, tropism, territorial behavior, migration	Knowledge		
<b>LS.3.6.7</b>	Describe the following structural adaptations for survival in the environment: coloration, mimicry, odor glands, beaks, feet, wings, fur, ears, spines, teeth, thorns, characteristics of seeds	Knowledge		
<b>LS.4.6.1</b>	Identify environmental conditions that can affect the survival of individual organisms and entire species	Knowledge		
<b>LS.4.6.2</b>	Conduct simulations demonstrating competition for resources within an ecosystem	Synthesis		

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<b>Second Quarter</b>				
<b>ESS.8.6.1</b>	Identify and diagram the layers of the Earth: crust, mantle, inner and outer core	Knowledge		
<b>ESS.8.6.2</b>	Model the layers of the Earth	Analysis		
<b>ESS.8.6.3</b>	Model how convection currents in the mantle affect lithosphere movement	Analysis		
<b>ESS.8.6.8</b>	Compare and contrast the different land forms caused by Earth's internal forces: mountains, plateaus, trenches, islands	Evaluation		
<b>ESS.8.6.9</b>	Research local, regional, and state landforms created by internal forces in the Earth: Ozark Plateau, Crater of Diamonds, Ouachita Mountains, New Madrid Fault	Analysis		
<b>ESS.9.6.3</b>	Analyze evidence that supports the theory of plate tectonics: matching coastlines, similar rock types, fossil records	Analysis		
<b>ESS.8.6.14</b>	Model the effect of major geological events on land and ocean features: mountain building, ocean trenches, island formation, mid-ocean ridges	Analysis		
<b>ESS.9.6.1</b>	Research methods of determining geologic time: fossil records, mountain building, rock sequencing	Analysis		
<b>ESS.9.6.2</b>	Model rock layer sequencing based on characteristics of fossils	Analysis		
<b>ESS.8.6.4</b>	Conduct investigations to identify the variables within volcanoes that cause different types of eruptions	Synthesis		
<b>ESS.8.6.5</b>	Diagram and explain how volcanoes work	Knowledge		
<b>ESS.8.6.6</b>	Explain how volcanic activity relates to mountain formation	Evaluation		
<b>ESS.8.6.7</b>	Connect short-term changes in climate with volcanic activity	Evaluation		
<b>ESS.8.6.10</b>	Identify the effects of earthquakes on Earth's surface: tsunamis, floods, changes in natural and man-made structures	Knowledge		
<b>ESS.8.6.11</b>	Investigate and map patterns of earthquake and volcanic activity	Knowledge		
<b>ESS.8.6.12</b>	Locate earthquake belts on Earth: Mediterranean-Trans-Asiatic, Circum-Pacific (Ring of Fire)	Knowledge		
<b>ESS.8.6.13</b>	Analyze how earthquake occurrences are recorded (seismograph) and measured (Richter scale)	Analysis		
<b>ESS.10.6.5</b>	Explain the effect of the sun on comets	Knowledge		
<b>ESS.10.6.1</b>	Explain how planets seem to wander against the background of the stars	Knowledge		
<b>ESS.10.6.6</b>	Compare and contrast comets, meteors, and asteroids by: size, orbits, nucleus, mass	Evaluation		
<b>ESS.10.6.7</b>	Model moon phases demonstrating the position of Earth, moon, and sun	Application		

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<b>ESS.10.6.8</b>	Compare and contrast solar eclipse and lunar eclipse	Evaluation		
<b>ESS.10.6.2</b>	Compare the distance of the following: from the sun to Earth (light minutes), from the next nearest star to Earth (light years)	Evaluation		
<b>ESS.10.6.3</b>	Describe how astronomers measure distance to stars	Knowledge		
<b>ESS.10.6.4</b>	Calculate the rate at which we would have to travel to other stars and planets in our solar system using current technology	Application		
<b>ESS.10.6.9</b>	Investigate careers, scientists, and historical breakthroughs related to the sun and space travel	Analysis		
<b>ESS.8.6.15</b>	Investigate careers, scientists, and historical breakthroughs related to internal forces that change the Earth	Analysis		
<b>Third Quarter</b>				
<b>PS.5.6.3</b>	Conduct investigations using acid/base indicators	Analysis		
<b>PS.5.6.1</b>	Identify common examples of chemical properties: ability to burn, ability to produce light, ability to react with other substances	Knowledge		
<b>PS.5.6.2</b>	Compare and contrast characteristics of physical and chemical properties	Evaluation		
<b>PS.5.6.7</b>	Identify characteristics of chemical changes: burning, production of a new substance, production of light, color change, endothermic and exothermic reactions, reactivity	Knowledge		
<b>PS.5.6.8</b>	Conduct investigations comparing and contrasting physical and chemical changes	Analysis		
<b>PS.5.6.9</b>	Demonstrate the law of conservation of matter	Knowledge		
<b>PS.5.6.5</b>	Construct a density column using a minimum of four different liquids (e.g., alcohol, colored water, syrup, oil)	Analysis		
<b>PS.5.6.6</b>	Use a density column to test the density of various solid objects (e.g., piece of candy, cork, candle, paper clip, egg)	Synthesis		
<b>PS.6.6.2</b>	Identify and analyze the simple machines that make up a compound machine	Analysis		
<b>PS.6.6.3</b>	Conduct investigations of various forces using SI units (newton)	Analysis		
<b>PS.6.6.4</b>	Recognize and give examples of different types of forces: gravitational forces, magnetic forces, friction	Knowledge		
<b>PS.6.6.7</b>	Describe the effects of force: move a stationary object, speed up, slow down, or change the direction of motion, change the shape of objects	Knowledge		
<b>PS.6.6.8</b>	Conduct investigations to demonstrate change in direction caused by force	Analysis		
<b>PS.6.6.9</b>	Conduct investigations to calculate the change in speed caused by applying forces to an object	Analysis		
<b>PS.6.6.5</b>	Understand why objects have weight	Knowledge		

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<b>PS.6.6.6</b>	Compare and contrast weight and mass	Evaluation		
<b>PS.7.6.1</b>	Classify examples of energy forms: chemical, electromagnetic, mechanical, thermal, nuclear	Application		
<b>PS.7.6.2</b>	Summarize the application of the law of conservation of energy in real world situations: electrical energy into mechanical energy, electrical energy into heat, chemical energy into mechanical energy, chemical energy into light	Evaluation		
<b>PS.7.6.3</b>	Conduct investigations demonstrating how energy can be converted from one form to another	Analysis		
<b>PS.7.6.4</b>	Investigate the transfer of energy in real world situations: conduction, convection, radiation	Knowledge		
<b>PS.5.6.10</b>	Investigate scientists, careers, and historical breakthroughs related to chemical properties and chemical changes	Analysis		
<b>PS.6.6.10</b>	Investigate careers, scientists, and historical breakthroughs related to compound machines and forces	Analysis		
<b>PS.7.6.5</b>	Investigate careers, scientists, and historical breakthroughs related to energy forms and conversions	Analysis		
<b>Fourth Quarter</b>				
<b>NS.1.6.2</b>	Apply components of experimental design used to produce empirical evidence: hypothesis, replication, sample size, appropriate use of control, use of standardized variables	Analysis		
<b>NS.1.6.5</b>	Communicate results and conclusions from scientific inquiry	Evaluation		
<b>NS.1.6.6</b>	Develop and implement strategies for long-term, accurate data collection	Synthesis		
<b>NS.1.6.1</b>	Verify accuracy of observations	Evaluation		