

**Inquiry Investigations™**  
**Earth's Resources MODULE - 1287232**  
**Grades: 6-9**

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**South Carolina Academic Standards**  
**Science**  
**Grade 6**

STANDARD / COURSE	SC.6-1.	Scientific Inquiry: The student will demonstrate an understanding of technological design and scientific inquiry, including process skills, mathematical thinking, controlled investigative design and analysis, and problem solving.
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	6-1.1.	<p>Use appropriate tools and instruments (including a spring scale, beam balance, barometer, and sling psychrometer) safely and accurately when conducting a controlled scientific investigation.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical</li> </ul>

		<p>Weathering</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>6-1.2.</p>	<p>Differentiate between observation and inference during the analysis and interpretation of data.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>

<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>6-1.3.</p>	<p>Classify organisms, objects, and materials according to their physical characteristics by using a dichotomous key.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>6-1.5.</p>	<p>Use appropriate safety procedures when conducting investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic</li> </ul>

		<p>and Allochromatic Minerals</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
<b>STANDARD / COURSE</b>	SC.6-2.	<b>Structures, Processes, and Responses of Plants: The student will demonstrate an understanding of structures, processes, and responses of plants that allow them to survive and reproduce. (Life Science)</b>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	6-2.1.	<p>Summarize the characteristics that all organisms share (including the obtainment and use of resources for energy, the response to stimuli, the ability to reproduce, and process of physical growth and development).</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	6-2.4.	<p>Summarize the basic functions of the structures of a flowering plant for defense, survival, and reproduction.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> </ul>

**South Carolina Academic Standards  
Science  
Grade 7**

<b>STANDARD / COURSE</b>	SC.7-1.	<b>Scientific Inquiry: The student will demonstrate an understanding of technological design and scientific inquiry, including process skills, mathematical thinking, controlled investigative design and analysis, and problem solving.</b>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	7-1.1.	<p>Use appropriate tools and instruments (including a microscope) safely and accurately when conducting a controlled scientific investigation.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary</li> </ul>

		<p>Rocks</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>7-1.2.</p>	<p>Generate questions that can be answered through scientific investigation.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the</li> </ul>

		<p>Hardness of a Mineral</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>7-1.6.</p>	<p>Critique a conclusion drawn from a scientific investigation.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>7-1.7.</p>	<p>Use appropriate safety procedures when conducting investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
<b>STANDARD / COURSE</b>	<b>SC.7-4.</b>	<b>Ecology: The Biotic and Abiotic Environment: The student will demonstrate an understanding of how organisms interact with and respond to the biotic and abiotic components of their environment. (Earth Science, Life Science)</b>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>7-4.3.</b>	<p>Explain the interaction among changes in the environment due to natural hazards (including landslides, wildfires, and floods), changes in populations, and limiting factors (including climate and the availability of food and water, space, and shelter).</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>7-4.4.</b>	<p>Explain the effects of soil quality on the characteristics of an ecosystem.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
<b>STANDARD / COURSE</b>	<b>SC.7-5.</b>	<b>The Chemical Nature of Matter: The student will demonstrate an understanding of the classifications and properties of matter and the changes that matter undergoes. (Physical Science)</b>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>7-5.2.</b>	<p>Classify matter as element, compound, or mixture on the basis of its composition.</p> <ul style="list-style-type: none"> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>7-5.3.</b>	<p>Compare the physical properties of metals and nonmetals.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>7-5.5.</b>	<p>Translate chemical symbols and the chemical formulas of common substances to show the component parts of the substances (including NaCl [table salt], H<sub>2</sub>O [water], C<sub>6</sub>H<sub>12</sub>O<sub>6</sub> [simple sugar], O<sub>2</sub> [oxygen gas], CO<sub>2</sub> [carbon dioxide], and N<sub>2</sub> [nitrogen gas]).</p> <ul style="list-style-type: none"> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>7-5.6.</b>	<p>Distinguish between acids and bases and use indicators (including litmus paper, pH paper, and phenolphthalein) to determine their relative pH.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame</li> </ul>

		<p>Test to Identify Unknown Mineral Samples</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	7-5.9.	<p>Compare physical properties of matter (including melting or boiling point, density, and color) to the chemical property of reactivity with a certain substance (including the ability to burn or to rust).</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	7-5.10.	<p>Compare physical changes (including changes in size, shape, and state) to chemical changes that are the result of chemical reactions (including changes in color or temperature and formation of a precipitate or gas).</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>

**South Carolina Academic Standards  
Science  
Grade 8**

STANDARD / COURSE	SC.8-1.	<p>Scientific Inquiry: The student will demonstrate an understanding of technological design and scientific inquiry, including process skills, mathematical thinking, controlled investigative design and analysis, and problem solving.</p>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-1.2.	<p>Recognize the importance of a systematic process for safely and accurately conducting investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a</li> </ul>

		<p>Mineral</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>8-1.3.</p>	<p>Construct explanations and conclusions from interpretations of data obtained during a controlled scientific investigation.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical</li> </ul>

		<p>Analysis of Minerals</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>8-1.4.</p>	<p>Generate questions for further study on the basis of prior investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p><b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b></p>	<p>8-1.6.</p>	<p>Use appropriate tools and instruments (including convex lenses, plane mirrors, color filters, prisms, and slinky springs) safely and accurately when conducting a controlled scientific investigation.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-1.7.	<p>Use appropriate safety procedures when conducting investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
STANDARD / COURSE	SC.8-2.	Earth's Biological History: The student will demonstrate an understanding of Earth's biological diversity over time. (Life Science, Earth Science)
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-2.2.	Summarize how scientists study Earth's past environment and diverse life-forms by examining different types of fossils (including molds, casts, petrified fossils, preserved and carbonized remains of plants and animals, and trace fossils).

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Teacher Resource CD: Fossils and Geologic Time</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-2.4.	<p>Recognize the relationship among the units - era, epoch, and period - into which the geologic time scale is divided.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Teacher Resource CD: Fossils and Geologic Time</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-2.5.	<p>Illustrate the vast diversity of life that has been present on Earth over time by using the geologic time scale.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Teacher Resource CD: Fossils and Geologic Time</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-2.6.	<p>Infer the relative age of rocks and fossils from index fossils and the ordering of the rock layers.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fossils and Geologic Time</li> </ul>
STANDARD / COURSE	SC.8-3.	Earth's Structure and Processes: The student will demonstrate an understanding of materials that determine the structure of Earth and the processes that have altered this structure. (Earth Science)
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-3.1.	<p>Summarize the three layers of Earth - crust, mantle, and core - on the basis of relative position, density, and composition.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>

KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-3.2.	<p>Explain how scientists use seismic waves - primary, secondary, and surface waves - and Earth's magnetic fields to determine the internal structure of Earth.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-3.4.	<p>Explain how igneous, metamorphic, and sedimentary rocks are interrelated in the rock cycle.</p> <ul style="list-style-type: none"> <li>Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-3.6.	<p>Explain how the theory of plate tectonics accounts for the motion of the lithospheric plates, the geologic activities at the plate boundaries, and the changes in landform areas over geologic time.</p> <ul style="list-style-type: none"> <li>Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-3.7.	<p>Illustrate the creation and changing of landforms that have occurred through geologic processes (including volcanic eruptions and mountain-building forces).</p> <ul style="list-style-type: none"> <li>Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-3.8.	<p>Explain how earthquakes result from forces inside Earth.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
STANDARD / COURSE	SC.8-4.	Astronomy: Earth and Space Systems: The student will demonstrate an understanding of the characteristics, structure, and predictable motions of celestial bodies. (Earth Science)
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-4.10.	<p>Compare the purposes of the tools and the technology that scientists use to study space (including various types of telescopes, satellites, space probes, and spectroscopes).</p>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
STANDARD / COURSE	SC.8-5.	Forces and Motion: The student will demonstrate an understanding of the effects of forces on the motion of an object. (Physical Science)
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	8-5.2.	Use the formula for average speed, $v = d/t$ , to solve real-world problems. <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> </ul>

South Carolina Academic Standards  
Science  
Grade 9

STANDARD / COURSE	SC.PS-1.	Physical Science: Scientific Inquiry: The student will demonstrate an understanding of how scientific inquiry and technological design, including mathematical analysis, can be used appropriately to pose questions, seek answers, and develop solutions.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	PS-1.2.	Use appropriate laboratory apparatuses, technology, and techniques safely and accurately when conducting a scientific investigation. <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
<p><b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b></p>	<p><b>PS-1.3.</b></p>	<p>Use scientific instruments to record measurement data in appropriate metric units that reflect the precision and accuracy of each particular instrument.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating</li> </ul>

		<p>Pangaea</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	PS-1.5.	<p>Organize and interpret the data from a controlled scientific investigation by using mathematics (including formulas and dimensional analysis), graphs, models, and/or technology.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	PS-1.9.	<p>Use appropriate safety procedures when conducting investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>

STANDARD / COURSE	SC.PS-3.	Physical Science: Chemistry: Structure and Properties of Matter: The student will demonstrate an understanding of various properties and classifications of matter.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	PS-3.1.	<p>Distinguish chemical properties of matter (including reactivity) from physical properties of matter (including boiling point, freezing/melting point, density [with density calculations], solubility, viscosity, and conductivity).</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	PS-3.4.	<p>Classify matter as a pure substance (either an element or a compound) or as a mixture (either homogeneous or heterogeneous) on the basis of its structure and/or composition.</p> <ul style="list-style-type: none"> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	PS-3.8.	<p>Classify various solutions as acids or bases according to their physical properties, chemical properties (including neutralization and reaction with metals), generalized formulas, and pH (using pH meters, or pH paper, and litmus paper).</p>

		<ul style="list-style-type: none"> <li>Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
STANDARD / COURSE	SC.PS-4.	Physical Science: Chemistry: Structure and Properties of Matter: The student will demonstrate an understanding of chemical reactions and the classifications, structures, and properties of chemical compounds.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	PS-4.6.	<p>Distinguish between chemical changes (including the formation of gas or reactivity with acids) and physical changes (including changes in size, shape, color, and/or phase).</p> <ul style="list-style-type: none"> <li>Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	PS-4.8.	<p>Summarize evidence (including the evolution of gas; the formation of a precipitate; and/or changes in temperature, color, and/or odor) that a chemical reaction has occurred.</p> <ul style="list-style-type: none"> <li>Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
STANDARD / COURSE	SC.PS-7.	Physical Science: Physics: The Interactions of Matter and Energy: The student will demonstrate an understanding of the nature and properties of mechanical and electromagnetic waves.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	PS-7.6.	<p>Summarize reflection and interference of both sound and light waves and the refraction and diffraction of light waves.</p> <ul style="list-style-type: none"> <li>Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
STANDARD / COURSE	SC.B-1.	Biology: Scientific Inquiry: The student will demonstrate an understanding of how scientific inquiry and technological design, including mathematical analysis, can be used appropriately to pose questions, seek answers, and develop solutions.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	B-1.2.	<p>Use appropriate laboratory apparatuses, technology, and techniques safely and accurately when conducting a scientific investigation.</p> <ul style="list-style-type: none"> <li>Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
<p><b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b></p>	<p>B-1.9.</p>	<p>Use appropriate safety procedures when conducting investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
STANDARD / COURSE	SC.B-5.	Biology: The student will demonstrate an understanding of biological evolution and the diversity of life.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	B-5.6.	Summarize ways that scientists use data from a variety of sources to investigate and critically analyze aspects of evolutionary theory. <ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> </ul>
STANDARD / COURSE	SC.C-1.	Chemistry: Scientific Inquiry: The student will demonstrate an understanding of how scientific inquiry and technological design, including mathematical analysis, can be used appropriately to pose questions, seek answers, and develop solutions.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-1.2.	Use appropriate laboratory apparatuses, technology, and techniques safely and accurately when conducting a scientific investigation. <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
<p><b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b></p>	<p>C-1.3.</p>	<p>Use scientific instruments to record measurement data in appropriate metric units that reflect the precision and accuracy of each particular instrument.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p><b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b></p>	<p>C-1.5.</p>	<p>Organize and interpret the data from a controlled scientific investigation by using mathematics (including formulas, scientific notation, and dimensional analysis), graphs, models, and/or technology.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p><b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b></p>	<p>C-1.8.</p>	<p>Use appropriate safety procedures when conducting investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and</li> </ul>

		<p>Fracture</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
STANDARD / COURSE	SC.C-3.	Chemistry: The student will demonstrate an understanding of the structures and classifications of chemical compounds.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-3.2.	<p>Interpret the names and formulas for ionic and covalent compounds.</p> <ul style="list-style-type: none"> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-3.5.	<p>Illustrate the structural formulas and names of simple hydrocarbons (including alkanes and their isomers and benzene rings).</p> <ul style="list-style-type: none"> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
STANDARD / COURSE	SC.C-5.	Chemistry: The student will demonstrate an understanding of the structure and behavior of the different phases of matter.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-5.4.	<p>Illustrate and interpret heating and cooling curves (including how boiling and melting points can be identified and how boiling points vary with changes in pressure).</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-5.6.	<p>Use density to determine the mass, volume, or number of particles of a gas in a chemical reaction.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-5.9.	<p>Analyze a chemical process to account for the weight of all reagents and solvents by following the appropriate material balance procedures.</p>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
STANDARD / COURSE	SC.C-6.	Chemistry: The student will demonstrate an understanding of the nature and properties of various types of chemical solutions.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-6.5.	Summarize the properties of salts, acids, and bases. <ul style="list-style-type: none"> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-6.6.	Distinguish between strong and weak common acids and bases. <ul style="list-style-type: none"> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-6.7.	Represent common acids and bases by their names and formulas. <ul style="list-style-type: none"> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	C-6.8.	Use the hydronium or hydroxide ion concentration to determine the pH and pOH of aqueous solutions. <ul style="list-style-type: none"> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
STANDARD / COURSE	SC.P-1.	Physics: Scientific Inquiry: The student will demonstrate an understanding of how scientific inquiry and technological design, including mathematical analysis, can be used appropriately to pose questions, seek answers, and develop solutions.
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	P-1.2.	Use appropriate laboratory apparatuses, technology, and techniques safely and accurately when conducting a scientific investigation. <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic</li> </ul>

		<p>and Allochromatic Minerals</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>P-1.3.</p>	<p>Use scientific instruments to record measurement data in appropriate metric units that reflect the precision and accuracy of each particular instrument.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>P-1.5.</p>	<p>Organize and interpret the data from a controlled scientific investigation by using (including calculations in scientific notation, formulas, and dimensional analysis), graphs, tables, models, diagrams, and/or technology.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>P-1.10.</p>	<p>Use appropriate safety procedures when conducting investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
<b>STANDARD / COURSE</b>	<b>SC.P-5.</b>	<b>Physics: The student will demonstrate an understanding of the properties and behaviors of mechanical and electromagnetic waves.</b>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>P-5.2.</b>	<p>Compare the properties of electromagnetic and mechanical waves.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>P-5.3.</b>	<p>Analyze wave behaviors (including reflection, refraction, diffraction, and constructive and destructive interference).</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
<b>STANDARD / COURSE</b>	<b>SC.ES-1.</b>	<b>Earth Science: Scientific Inquiry: The student will demonstrate an understanding of how scientific inquiry and technological design, including mathematical analysis, can be used appropriately to pose questions, seek answers, and develop solutions.</b>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>ES-1.2.</b>	<p>Use appropriate laboratory apparatuses, technology, and techniques safely and accurately when conducting a scientific investigation.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>ES-1.3.</p>	<p>Use scientific instruments to record measurement data in appropriate metric units that reflect the precision and accuracy of each particular instrument.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>ES-1.4.</p>	<p>Design a scientific investigation with appropriate methods of control to test a hypothesis (including independent and dependent variables), and evaluate the designs of sample investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>ES-1.5.</p>	<p>Organize and interpret the data from a controlled scientific investigation by using mathematics (including calculations in scientific notation, formulas, and dimensional analysis), graphs, tables, models, diagrams, and/or technology.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>ES-1.6.</p>	<p>Evaluate the results of a controlled scientific investigation in terms of whether they refute or verify the hypothesis.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic</li> </ul>

		<p>and Allochromatic Minerals</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>ES-1.7.</p>	<p>Evaluate conclusions based on qualitative and quantitative data (including the impact of parallax, instrument malfunction, or human error) on experimental results.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting</li> </ul>

		<p>and Identification</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<p>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</p>	<p>ES-1.10.</p>	<p>Use appropriate safety procedures when conducting investigations.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure</li> <li>• Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons</li> </ul>

		<ul style="list-style-type: none"> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<b>STANDARD / COURSE</b>	<b>SC.ES-3.</b>	<b>Earth Science: Solid Earth; Students will demonstrate an understanding of the internal and external dynamics of solid Earth.</b>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>ES-3.1.</b>	<p>Summarize theories and evidence of the origin and formation of Earth's systems by using the concepts of gravitational force and heat production.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Teacher Resource CD: Fossils and Geologic Time</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>ES-3.2.</b>	<p>Explain the differentiation of the structure of Earth's layers into a core, mantle, and crust based on the production of internal heat from the decay of isotopes and the role of gravitational energy.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Teacher Resource CD: Fossils and Geologic Time</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>ES-3.3.</b>	<p>Summarize theory of plate tectonics (including the role of convection currents, the action at plate boundaries, and the scientific evidence for the theory).</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>ES-3.4.</b>	<p>Explain how forces due to plate tectonics cause crustal changes as evidenced in earthquake activity, volcanic eruptions, and mountain building.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat</li> </ul>

		<p>and Pressure on Rock Layers</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	ES-3.5.	<p>Analyze surface features of Earth in order to identify geologic processes (including weathering, erosion, deposition, and glaciation) that are likely to have been responsible for their formation.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering</li> <li>• Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering</li> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	ES-3.6.	<p>Explain how the dynamic nature of the rock cycle accounts for the interrelationships among igneous, sedimentary, and metamorphic rocks.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	ES-3.7.	<p>Classify minerals and rocks on the basis of their physical and chemical properties and the environment in which they were formed.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle</li> <li>• Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks</li> <li>• Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral</li> <li>• Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and</li> </ul>

		<p>Fracture</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals</li> <li>• Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> <li>• Virtual Laboratory: Mineral Identification</li> </ul>
<b>STANDARD / COURSE</b>	<b>SC.ES-4.</b>	<b>Earth Science: Earth's Atmosphere: The student will demonstrate an understanding of the dynamics of Earth's atmosphere.</b>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>ES-4.7.</b>	<p>Summarize the evidence for the likely impact of human activities on the atmosphere (including ozone holes, greenhouse gases, acid rain, and photochemical smog).</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Rocks, Minerals, and Earth Processes</li> </ul>
<b>STANDARD / COURSE</b>	<b>SC.ES-6.</b>	<b>Earth Science: The Paleobiosphere: Students will demonstrate an understanding of the dynamic relationship between Earth's conditions over geologic time and the diversity of its organisms.</b>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>ES-6.2.</b>	<p>Recall the divisions of the geologic time scale and illustrate the changes (in complexity and/or diversity) of organisms that have existed across these time units.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea</li> <li>• Teacher Resource CD: Fossils and Geologic Time</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION</b>	<b>ES-6.3.</b>	<p>Summarize how fossil evidence reflects the changes in environmental conditions on Earth over time.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification</li> <li>• Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts</li> <li>• Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig</li> <li>• Teacher Resource CD: Fossils and Geologic Time</li> </ul>
<b>KNOWLEDGE AND SKILLS / ESSENTIAL</b>	<b>ES-6.4.</b>	<p>Match dating methods (including index fossils, ordering of rock layers, and radiometric dating) with the most appropriate application for</p>

QUESTION		<p>estimating geologic time.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fossils and Geologic Time</li> </ul>
KNOWLEDGE AND SKILLS / ESSENTIAL QUESTION	ES-6.5.	<p>Infer explanations concerning the age of the universe and the age of Earth on the basis of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time</li> </ul>

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