

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

Frey Scientific
 80 Northwest Boulevard
 Nashua, NH 03063-4067
 1-800-225-3739
 www.freyscientific.com
 www.freyscientific.com/inquiryinvestigations

Alabama Courses of Study
Science
Grade 6

STANDARD	AL. 1.	Earth and Space Science - Students will:
OBJECTIVE	1.2.	<p>Describe factors that cause changes to Earth's surface over time. Examples: earthquakes, volcanoes, weathering, erosion, glacial erosion or scouring, deposition, water flow, tornadoes, hurricanes, farming and conservation, mining and reclamation, deforestation and reforestation, waste disposal, global climate changes, greenhouse gases</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals • Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering • Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	1.2.a.	<p>Additional Minimum Content: Comparing constructive and destructive natural processes and their effects on land formations. Examples: constructive - volcanic and mountain-building processes; destructive - erosion by wind, water, and ice</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering • Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	1.2.b.	<p>Additional Minimum Content: Distinguishing rock strata by geologic composition. Examples: predicting relative age of strata by fossil depth, predicting occurrence of natural events by rock composition in a particular strata</p> <ul style="list-style-type: none"> • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	1.4.	<p>Explain the plate tectonic theory. Example: using terminology such as</p>

		<p>continental drift, seafloor spreading, lava, magma, eruption, epicenter, focus, seismic wave, and subduction zone</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	1.4.a.	<p>Additional Minimum Content: Describing types of volcanoes and faults</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	1.4.b.	<p>Additional Minimum Content: Determining energy release through seismographic data. Example: using data from the Mercalli scale and the Richter scale</p> <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes

**Alabama Courses of Study
Science
Grade 8**

STANDARD	AL. 1.	Physical Science - Students will:
OBJECTIVE	1.1.c.	<p>Additional Minimum Content: Measuring dimension, volume, and mass using Systeme International d'Unites (SI units)</p> <ul style="list-style-type: none"> • Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig
OBJECTIVE	1.1.e.	<p>Additional Minimum Content: Identifying appropriate laboratory glassware, balances, time measuring equipment, and optical instruments used to conduct an investigation</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks • Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks • Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color • Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster • Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral • Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral • Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture • Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity • Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals • Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of

		<p>Minerals</p> <ul style="list-style-type: none"> • Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples • Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time • Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification • Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts • Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering • Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering • Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure • Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig • Virtual Laboratory: Mineral Identification
OBJECTIVE	1.6.c.	<p>Additional Minimum Content: Describing acids and bases based on their hydrogen ion concentration</p> <ul style="list-style-type: none"> • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig
OBJECTIVE	1.12.a.	<p>Additional Minimum Content: Describing how earthquake waves, sound waves, water waves, and electromagnetic waves can be destructive or beneficial due to the transfer of energy</p> <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes

**Alabama Courses of Study
Science
Grade 9**

STANDARD	AL.1.	Physical Science Core - Students will:
OBJECTIVE	1.4.	<p>Use nomenclature and chemical formulas to write balanced chemical equations.</p> <ul style="list-style-type: none"> • Virtual Laboratory: Mineral Identification
OBJECTIVE	1.12.	<p>Identify metric units for mass, distance, time, temperature, velocity, acceleration, density, force, energy, and power.</p> <ul style="list-style-type: none"> • Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity
STANDARD	AL.2.	Biology Core - Students will:
OBJECTIVE	2.1.a.	<p>Additional Minimum Content: Describing the steps of the scientific method</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks

		<ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks • Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color • Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster • Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral • Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral • Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture • Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity • Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals • Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals • Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples • Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time • Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification • Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts • Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering • Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering • Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure • Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig • Virtual Laboratory: Mineral Identification
OBJECTIVE	2.1.c.	<p>Additional Minimum Content: Identifying safe laboratory procedures when handling chemicals and using Bunsen burners and laboratory glassware</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks • Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks • Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color • Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster • Earth Resources: Unit 2 Lab 3 Activity 3: The Streak of a Mineral • Earth Resources: Unit 2 Lab 3 Activity 4: Testing the Hardness of a Mineral • Earth Resources: Unit 2 Lab 3 Activity 5: Cleavage and Fracture • Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity • Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals • Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals • Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples

		<ul style="list-style-type: none"> • Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time • Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification • Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts • Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering • Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering • Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure • Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig
OBJECTIVE	2.12.b.	<p>Additional Minimum Content: Describing natural selection, survival of the fittest, geographic isolation, and fossil record</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time • Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification • Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	2.14.a.	<p>Additional Minimum Content: Relating natural disasters, climate changes, nonnative species, and human activity to the dynamic equilibrium of ecosystems. Examples: natural disasters - habitat destruction resulting from tornadoes; climate changes - changes in migratory patterns of birds; nonnative species - exponential growth of kudzu and Zebra mussels due to absence of natural controls; human activity - habitat destruction resulting in reduction of biodiversity, conservation resulting in preservation of biodiversity</p> <ul style="list-style-type: none"> • Earth Resources: Unit 2 Lab 4 Activity 1: Idiochromatic and Allochromatic Minerals • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea
STANDARD	AL.3.	Chemistry Core - Students will:
OBJECTIVE	3.1.	<p>Differentiate among pure substances, mixtures, elements, and compounds.</p> <ul style="list-style-type: none"> • Virtual Laboratory: Mineral Identification
OBJECTIVE	3.1.a.	<p>Additional Minimum Content: Distinguishing between intensive and extensive properties of matter</p> <ul style="list-style-type: none"> • Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering • Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering • Teacher Resource CD: Rocks, Minerals, and Earth Processes • Virtual Laboratory: Mineral Identification
OBJECTIVE	3.1.b.	<p>Additional Minimum Content: Contrasting properties of metals, nonmetals,</p>

		and metalloids <ul style="list-style-type: none"> • Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster
OBJECTIVE	3.1.c.	Additional Minimum Content: Distinguishing between homogeneous and heterogeneous forms of matter <ul style="list-style-type: none"> • Virtual Laboratory: Mineral Identification
OBJECTIVE	3.4.c.	Additional Minimum Content: Describing acids and bases in terms of strength, concentration, pH, and neutralization reactions <ul style="list-style-type: none"> • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig
OBJECTIVE	3.6.c.	Additional Minimum Content: Identifying the nomenclature of ionic compounds, binary compounds, and acids <ul style="list-style-type: none"> • Virtual Laboratory: Mineral Identification
STANDARD	AL.4.	Physics Core - Students will:
OBJECTIVE	4.7.	Describe properties of reflection, refraction, and diffraction. Examples: tracing the path of a reflected light ray, predicting the formation of reflected images through tracing of rays <ul style="list-style-type: none"> • Earth Resources: Unit 2 Lab 3 Activity 2: Mineral Luster • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig • Teacher Resource CD: Rocks, Minerals, and Earth Processes
STANDARD	AL.6.	Botany Elective Core - Students will:
OBJECTIVE	6.6.	Explain the importance of soil type, texture, and nutrients to plant growth. <ul style="list-style-type: none"> • Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure • Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig • Teacher Resource CD: Rocks, Minerals, and Earth Processes
STANDARD	AL.7.	Earth and Space Science Elective Core - Students will:
OBJECTIVE	7.7.	Explain techniques for determining the age and composition of Earth and the universe. <ul style="list-style-type: none"> • Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	7.10.a.	Additional Minimum Content: Identifying classical instruments used to extend the senses and increase knowledge of the universe, including optical telescopes, radio telescopes, spectrosopes, and cameras <ul style="list-style-type: none"> • Earth Resources: Unit 2 Lab 4 Activity 2: Chemical Analysis of Minerals • Earth Resources: Unit 2 Lab 4 Activity 3: Using the Flame Test to Identify Unknown Mineral Samples

		<ul style="list-style-type: none"> Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig
STANDARD	AL.8.	Environmental Science Elective Core - Students will:
OBJECTIVE	8.2.e.	<p>Additional Minimum Content: Identifying effects of fossil fuel by-products on the environment, including ozone depletion; formation of acid rain, brown haze, and greenhouse gases; and concentration of particulates and heavy metals</p> <ul style="list-style-type: none"> Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	8.4.	<p>Identify the impact of pollutants on the atmosphere.</p> <ul style="list-style-type: none"> Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	8.4.b.	<p>Additional Minimum Content: Describing the formation of primary, secondary, and indoor air pollutants</p> <ul style="list-style-type: none"> Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	8.4.c.	<p>Additional Minimum Content: Relating pollutants to smog and thermal inversions</p> <ul style="list-style-type: none"> Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	8.10.	<p>Describe the composition of soil profiles and soil samples of varying climates.</p> <ul style="list-style-type: none"> Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	8.10.a.	<p>Additional Minimum Content: Identifying various processes and activities that promote soil formation. Examples: weathering, decomposition, deposition</p> <ul style="list-style-type: none"> Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	8.10.b.	<p>Additional Minimum Content: Relating particle size to soil texture and type of sand, silt, or clay</p> <ul style="list-style-type: none"> Earth Resources: Unit 4 Lab 7 Activity 1: Soil Structure Earth Resources: Unit 4 Lab 7 Activity 2: Soil Horizons Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	8.11.	<p>Describe agents of erosion, including moving water, gravity, glaciers, and wind.</p> <ul style="list-style-type: none"> Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle

		<ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock
STANDARD	AL.11.	Geology Elective Core - Students will:
OBJECTIVE	11.1.	<p>Describe Earth's layers, including the lithosphere, asthenosphere, outer core, and inner core.</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Rocks, Minerals, and Earth Processes • Virtual Laboratory: Mineral Identification
OBJECTIVE	11.1.a.	<p>Additional Minimum Content: Identifying methods for determining the composition of Earth's lithosphere. Example: collection and analysis of rocks and minerals</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.1.b.	<p>Additional Minimum Content: Describing the composition of Earth's lithosphere. Example: granitic and basaltic rocks</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.1.c.	<p>Additional Minimum Content: Relating the types of lithosphere to tectonic plates. Examples: granitic lithosphere with continental plates, basaltic lithosphere with oceanic plates</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.1.d.	<p>Additional Minimum Content: Comparing the temperature, density, and composition of Earth's crust to that of the mantle and outer and inner cores</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Virtual Laboratory: Mineral Identification
OBJECTIVE	11.2.	<p>Relate the concept of equilibrium to geological processes, including plate tectonics and stream flow. Examples: stream channel on a slope, movement of tectonic plates, convection within Earth</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering • Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea

		<ul style="list-style-type: none"> Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.3.	<p>Explain natural phenomena that shape the surface of Earth, including rock cycles, plate motions and interactions, erosion and deposition, volcanism, earthquakes, weathering, and tides.</p> <ul style="list-style-type: none"> Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.4.	<p>Describe the topography of the sea floor and the continents.</p> <ul style="list-style-type: none"> Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea
OBJECTIVE	11.4.b.	<p>Additional Minimum Content: Explaining changes of continental topography caused by erosion and uplift. Example: formation of southern Appalachian Mountains in Alabama</p> <ul style="list-style-type: none"> Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.5.	<p>Classify rocks as sedimentary, igneous, and metamorphic.</p> <ul style="list-style-type: none"> Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.5.a.	<p>Additional Minimum Content: Identifying characteristics of extrusive and intrusive igneous rocks</p> <ul style="list-style-type: none"> Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig Teacher Resource CD: Rocks, Minerals, and Earth Processes

OBJECTIVE	11.5.b.	<p>Additional Minimum Content: Describing mineral composition and chemical elements of rocks</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks • Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig
OBJECTIVE	11.5.c.	<p>Additional Minimum Content: Describing characteristics of clastic, organic, and chemical sedimentary rocks</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.5.d.	<p>Additional Minimum Content: Explaining texture and composition of rocks</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks • Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig
OBJECTIVE	11.6.	<p>Explain the concept of geological time within the framework of the geologic time scale.</p> <ul style="list-style-type: none"> • Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time • Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification • Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	11.6.a.	<p>Additional Minimum Content: Describing how sedimentary rocks provide a record of evolutionary change</p> <ul style="list-style-type: none"> • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	11.6.b.	<p>Additional Minimum Content: Describing the role of fossils in determining the age of strata</p> <ul style="list-style-type: none"> • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	11.6.c.	<p>Additional Minimum Content: Identifying geological time scales, including</p>

		<p>eon, era, period, and epoch</p> <ul style="list-style-type: none"> • Earth Resources: Unit 3 Lab 5 Activity 1: Fossils and Geologic Time • Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification • Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	11.6.d.	<p>Additional Minimum Content: Identifying relative and absolute dating methods</p> <ul style="list-style-type: none"> • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	11.7.	<p>Describe processes of rock formation. Examples: cooling, deposition</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.7.a.	<p>Additional Minimum Content: Explaining factors that control texture and composition of rocks. Examples: formation depth, formation size, chemical composition</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks • Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.7.b.	<p>Additional Minimum Content: Describing processes of fossil formation</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock • Earth Resources: Unit 3 Lab 5 Activity 3: Fossil Formation - Preparing Molds and Casts • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	11.8.	<p>Explain interactions among topography, climate, organic activity, time, and parent material through which soils are created.</p> <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.10.	<p>Explain the mechanism of plate tectonics.</p>

		<ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.10.a.	<p>Additional Minimum Content: Explaining processes that cause earthquakes and volcanic eruptions</p> <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.10.b.	<p>Additional Minimum Content: Identifying Earth's main tectonic plates</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.10.c.	<p>Additional Minimum Content: Describing faults and folds and their relationships to tectonic forces</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 3: Effects of Heat and Pressure on Rock Layers • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.10.d.	<p>Additional Minimum Content: Describing technologies used to measure and forecast earthquakes and volcanic eruptions</p> <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.13.a.	<p>Additional Minimum Content: Explaining the formation of alluvial fans</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 2: Creating a Sedimentary Rock
OBJECTIVE	11.15.a.	<p>Additional Minimum Content: Identifying geological ages of Alabama rocks</p> <ul style="list-style-type: none"> • Teacher Resource CD: Fossils and Geologic Time
OBJECTIVE	11.15.c.	<p>Additional Minimum Content: Identifying earthquake zones in Alabama</p> <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes
OBJECTIVE	11.15.d.	<p>Additional Minimum Content: Identifying types of rocks in Alabama</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Earth Resources: Unit 1 Lab 1 Activity 4: Crystallization • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Earth Resources: Unit 1 Lab 2 Activity 2: Sedimentary Rocks • Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig

		<ul style="list-style-type: none"> Teacher Resource CD: Rocks, Minerals, and Earth Processes
STANDARD	AL.13.	Marine Science Elective Core - Students will:
OBJECTIVE	13.3.	<p>Describe physical characteristics of oceans, including topography of the ocean floor, plate tectonics, wave motion, depth, and pressure.</p> <ul style="list-style-type: none"> Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea Teacher Resource CD: Rocks, Minerals, and Earth Processes

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