

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

Rhode Island Standards and State Frameworks
Science
Grade 6

DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (5-8) INQ+ POC-1.	Use geological evidence provided to support the idea that the Earth's crust/lithosphere is composed of plates that move.
PERFORMANCE STANDARD	ESS1 (5-6)-1.	Students demonstrate an understanding of processes and change over time within earth systems by...
GRADE SPAN EXPECTATION	1a.	Identifying and describing the layers of the earth. <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 1 Activity 1: The Rock Cycle • Virtual Laboratory: Mineral Identification
GRADE SPAN EXPECTATION	1b.	Plotting location of volcanoes and earthquakes and explaining the relationship between the location of these phenomena and faults. <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (5-8) INQ+ POC-5.	Using data about a rock's physical characteristics make and support an inference about the rock's history and connection to rock cycle.
PERFORMANCE STANDARD	ESS1 (5-6)-5.	Students demonstrate an understanding of processes and change over time by...
GRADE SPAN EXPECTATION	5a.	Representing the processes of the rock cycle in words, diagrams, or models. <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
GRADE SPAN EXPECTATION	5b.	Citing evidence and developing a logical argument to explain the formation of a rock, given its characteristics and

		<p>location. (e.g. classifying rock type using identification resources).</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
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.LS3.	Life Science: Groups of organisms show evidence of change over time (structures, behaviors, and biochemistry).
ASSESSMENT TARGET	LS3 (5-8) POC-9.	Cite examples supporting the concept that certain traits of organisms may provide a survival advantage in a specific environment and therefore, an increased likelihood to produce offspring.
PERFORMANCE STANDARD	LS3 (5-6)-9.	Students demonstrate an understanding of Natural Selection/evolution by...
GRADE SPAN EXPECTATION	9c.	<p>Explaining how fossil evidence can be used to understand the history of life on Earth.</p> <ul style="list-style-type: none"> • Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification • Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea • Teacher Resource CD: Fossils and Geologic Time
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.PS1.	Physical Science: All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).
ASSESSMENT TARGET	PS1 (5-8) INQ-1.	Investigate the relationships among mass, volume and density.
PERFORMANCE STANDARD	PS1 (5-6)-1.	Students demonstrate an understanding of characteristic properties of matter by...
GRADE SPAN EXPECTATION	1a.	<p>Comparing the masses of objects of equal volume made of different substances.</p> <ul style="list-style-type: none"> • Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.PS1.	Physical Science: All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).
ASSESSMENT TARGET	PS1 (5-8) INQ+POC-2.	Given data about characteristic properties of matter (e.g., melting and boiling points, density, solubility) identify, compare, or classify different substances.

PERFORMANCE STANDARD	PS1 (5-6)-2.	Students demonstrate an understanding of characteristic properties of matter by...
GRADE SPAN EXPECTATION	2a.	<p>Recognizing that different substances have properties, which allow them to be identified regardless of the size of the sample.</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 • Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering • Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig • Teacher Resource CD: Rocks, Minerals, and Earth Processes • Virtual Laboratory: Mineral Identification
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.PS1.	Physical Science: All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).
ASSESSMENT TARGET	PS1 (5-8) SAE+MAS-4.	Represent or explain the relationship between or among energy, molecular motion, temperature, and states of matter.
PERFORMANCE	PS1 (5-6)-4.	Students demonstrate an understanding of states of matter by...

STANDARD		
GRADE SPAN EXPECTATION	4b.	<p>Predicting the effects of heating and cooling on the physical state, volume and mass of a substance.</p> <ul style="list-style-type: none"> • Earth Resources: Unit 1 Lab 2 Activity 1: Igneous Rocks • Earth Resources: Unit 1 Lab 2 Activity 3: Metamorphic Rocks • Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.PS1.	Physical Science: All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).
ASSESSMENT TARGET	PS1 (5-8) MAS-5.	Given graphic or written information, classify matter as atom/molecule or element/compound (Not the structure of an atom).
PERFORMANCE STANDARD	PS1 (5-6)-5.	Students demonstrate an understanding of the structure of matter by...
GRADE SPAN EXPECTATION	5a.	<p>Distinguishing between solutions, mixtures, and 'pure' substances, i.e. compounds and elements.</p> <ul style="list-style-type: none"> • Virtual Laboratory: Mineral Identification

Rhode Island Standards and State Frameworks
Science
Grade 7

DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (5-8) INQ+ POC-1.	Use geological evidence provided to support the idea that the Earth's crust/lithosphere is composed of plates that move.
PERFORMANCE STANDARD	ESS1 (7-8)-1.	Students demonstrate an understanding of processes and change over time within earth systems by...
GRADE SPAN EXPECTATION	1a.	<p>Citing evidence and developing a logical argument for plate movement using fossil evidence, layers of sedimentary rock, location of mineral deposits, and shape of the continents.</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
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (5-8) POC-3.	Explain how earth events (abruptly and over time) can bring about changes in Earth's surface: landforms, ocean floor, rock features, or climate.
PERFORMANCE STANDARD	ESS1 (7-8)-3.	Students demonstrate an understanding of processes and change over time within earth systems by...
GRADE SPAN	3a.	Evaluating slow processes (e.g. weathering, erosion, mountain

EXPECTATION		<p>building, sea floor spreading) to determine how the earth has changed and will continue to change over time.</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 • Teacher Resource CD: Rocks, Minerals, and Earth Processes
GRADE SPAN EXPECTATION	3b.	<p>Evaluating fast processes (e.g. erosion, volcanoes and earthquakes) to determine how the earth has changed and will continue to change over time.</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
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (5-8) SAE+ POC-4.	Explain the role of differential heating or convection in ocean currents, winds, weather and weather patterns, atmosphere, or climate.
PERFORMANCE STANDARD	ESS1 (7-8)-4.	Students demonstrate an understanding of processes and change over time within earth systems by...
GRADE SPAN EXPECTATION	4b.	<p>Using evidence to make inferences or predictions about global climate issues.</p> <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.PS1.	Physical Science: All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).
ASSESSMENT TARGET	PS1 (5-8) INQ-1.	Investigate the relationships among mass, volume and density.
PERFORMANCE	PS1 (7-8)-	Students demonstrate an understanding of characteristic properties of matter by...

STANDARD	1.	
GRADE SPAN EXPECTATION	1a.	Measuring mass and volume of both regular and irregular objects and using those values as well as the relationship $D=m/v$ to calculate density. <ul style="list-style-type: none"> Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.PS1.	Physical Science: All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).
ASSESSMENT TARGET	PS1 (5-8)-MAS-5.	Given graphic or written information, classify matter as atom/molecule or element/compound (Not the structure of an atom).
PERFORMANCE STANDARD	PS1 (7-8)-5.	Students demonstrate an understanding of the structure of matter by...
GRADE SPAN EXPECTATION	5b.	Classifying common elements and compounds using symbols and simple chemical formulas. <ul style="list-style-type: none"> Virtual Laboratory: Mineral Identification
GRADE SPAN EXPECTATION	5e.	Explaining that when substances undergo physical changes, the appearance may change but the chemical makeup and chemical properties do not. <ul style="list-style-type: none"> Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color
GRADE SPAN EXPECTATION	5f.	Explaining that when substances undergo chemical changes to form new substances, the properties of the new combinations may be very different from those of the old. <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 Earth Resources: Unit 4 Lab 6 Activity 1: Mechanical Weathering Earth Resources: Unit 4 Lab 6 Activity 2: Chemical Weathering Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig

Rhode Island Standards and State Frameworks

Science

Grade 8

DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (5-8) INQ+ POC-1.	Use geological evidence provided to support the idea that the Earth's crust/lithosphere is composed of plates that move.
PERFORMANCE STANDARD	ESS1 (7-8)-1.	Students demonstrate an understanding of processes and change over time within earth systems by...

GRADE SPAN EXPECTATION	1a.	<p>Citing evidence and developing a logical argument for plate movement using fossil evidence, layers of sedimentary rock, location of mineral deposits, and shape of the continents.</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
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (5-8) POC-3.	Explain how earth events (abruptly and over time) can bring about changes in Earth's surface: landforms, ocean floor, rock features, or climate.
PERFORMANCE STANDARD	ESS1 (7-8)-3.	Students demonstrate an understanding of processes and change over time within earth systems by...
GRADE SPAN EXPECTATION	3a.	<p>Evaluating slow processes (e.g. weathering, erosion, mountain building, sea floor spreading) to determine how the earth has changed and will continue to change over time.</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 • Teacher Resource CD: Rocks, Minerals, and Earth Processes
GRADE SPAN EXPECTATION	3b.	<p>Evaluating fast processes (e.g. erosion, volcanoes and earthquakes) to determine how the earth has changed and will continue to change over time.</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
DOMAIN / STATEMENT	RI.ESS1.	Earth and Space Science: The earth and earth materials as

OF ENDURING KNOWLEDGE		we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (5-8) SAE+ POC-4.	Explain the role of differential heating or convection in ocean currents, winds, weather and weather patterns, atmosphere, or climate.
PERFORMANCE STANDARD	ESS1 (7-8)-4.	Students demonstrate an understanding of processes and change over time within earth systems by...
GRADE SPAN EXPECTATION	4b.	Using evidence to make inferences or predictions about global climate issues. <ul style="list-style-type: none"> Teacher Resource CD: Rocks, Minerals, and Earth Processes
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.PS1.	Physical Science: All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).
ASSESSMENT TARGET	PS1 (5-8) INQ-1.	Investigate the relationships among mass, volume and density.
PERFORMANCE STANDARD	PS1 (7-8)-1.	Students demonstrate an understanding of characteristic properties of matter by...
GRADE SPAN EXPECTATION	1a.	Measuring mass and volume of both regular and irregular objects and using those values as well as the relationship $D=m/v$ to calculate density. <ul style="list-style-type: none"> Earth Resources: Unit 2 Lab 3 Activity 6: Specific Gravity
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.PS1.	Physical Science: All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).
ASSESSMENT TARGET	PS1 (5-8) MAS-5.	Given graphic or written information, classify matter as atom/molecule or element/compound (Not the structure of an atom).
PERFORMANCE STANDARD	PS1 (7-8)-5.	Students demonstrate an understanding of the structure of matter by...
GRADE SPAN EXPECTATION	5b.	Classifying common elements and compounds using symbols and simple chemical formulas. <ul style="list-style-type: none"> Virtual Laboratory: Mineral Identification
GRADE SPAN EXPECTATION	5e.	Explaining that when substances undergo physical changes, the appearance may change but the chemical makeup and chemical properties do not. <ul style="list-style-type: none"> Earth Resources: Unit 2 Lab 3 Activity 1: Identifying Mineral Color
GRADE SPAN EXPECTATION	5f.	Explaining that when substances undergo chemical changes to form new substances, the properties of the new combinations may be very different from those of the old. <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

		<p>Flame Test to Identify Unknown Mineral Samples</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 • Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig
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Rhode Island Standards and State Frameworks
Science
Grade 9

DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (9-11) POC-1.	Provided with geologic data (including movement of plates) on a given locale, predict the likelihood for an earth event (e.g., volcanoes, mountain ranges, islands, earthquakes).
PERFORMANCE STANDARD	ESS1 (9-11)-1.	Students demonstrate an understanding of processes and change over time within earth systems by...
GRADE SPAN EXPECTATION	1a.	<p>Plotting the location of mountain ranges and recent earthquakes and volcanic eruptions to identify any existing patterns.</p> <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (9-11) NOS-2.	Trace the development of the theory of plate tectonics or provide supporting geologic/geographic evidence that supports the validity of the theory of plate tectonics.
PERFORMANCE STANDARD	ESS1 (9-11)-2.	Students demonstrate an understanding of processes and change over time within earth systems by...
GRADE SPAN EXPECTATION	2a.	<p>Using given data (diagrams, charts, narratives, etc.) and advances in technology to explain how scientific knowledge regarding plate tectonics has changed over time.</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
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (9-11) SAE+ POC-3.	Explain how internal and external sources of heat (energy) fuel geologic processes (e.g., rock cycle, plate tectonics, sea floor spreading).
PERFORMANCE STANDARD	ESS1 (9-11)-3.	Students demonstrate an understanding of processes and change over time within earth systems by...
GRADE SPAN EXPECTATION	3a.	Explaining how heat (produced by friction, radioactive decay

		<p>and pressure) affects the Rock Cycle.</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
GRADE SPAN EXPECTATION	3b.	<p>Explaining how convection circulations of the mantle initiate the movement of the crustal plates which then cause plate movement and seismic activity.</p> <ul style="list-style-type: none"> • Teacher Resource CD: Rocks, Minerals, and Earth Processes
GRADE SPAN EXPECTATION	3c.	<p>Investigating and using evidence to explain that conservation in the amount of earth materials occurs during the Rock Cycle.</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
GRADE SPAN EXPECTATION	3d.	<p>Explaining how the physical and chemical processes of the Earth alter the crust (e.g. seafloor spreading, hydrologic cycle, weathering, element cycling).</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 • Teacher Resource CD: Rocks, Minerals, and Earth Processes
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (9-11) INQ+POC+ MAS-4.	Relate how geologic time is determined using various dating methods (e.g. radioactive decay, rock sequences, fossil records).

PERFORMANCE STANDARD	ESS1 (9-11)-4.	Students demonstrate an understanding of processes and change over time by...
GRADE SPAN EXPECTATION	4a.	Describing various dating methods to determine the age of different rock structures. <ul style="list-style-type: none"> Teacher Resource CD: Fossils and Geologic Time
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.ESS1.	Earth and Space Science: The earth and earth materials as we know them today have developed over long periods of time, through continual change processes.
ASSESSMENT TARGET	ESS1 (9-11) INQ+POC+MAS-4.	Relate how geologic time is determined using various dating methods (e.g. radioactive decay, rock sequences, fossil records).
PERFORMANCE STANDARD	ESS1 (Ext.)-4.	Example Extension(s): Students demonstrate an understanding of processes and change over time by...
GRADE SPAN EXPECTATION	4bb.	Analyzing samples of rock to determine the relative age of the rock structure. <ul style="list-style-type: none"> Teacher Resource CD: Fossils and Geologic Time
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.LS2.	Life Science: Matter cycles and energy flows through an ecosystem.
ASSESSMENT TARGET	LS2 (9-11) INQ+SAE-3.	Using data from a specific ecosystem, explain relationships or make predictions about how environmental disturbance (human impact or natural events) affects the flow of energy or cycling of matter in an ecosystem.
PERFORMANCE STANDARD	LS2 (9-11)-3.	Students demonstrate an understanding of equilibrium in an ecosystem by...
GRADE SPAN EXPECTATION	3c.	Describing ways in which natural events (e.g. floods and fires) can modify ecosystems and describe and predict the potential effects. <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
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.LS2.	Life Science: Matter cycles and energy flows through an ecosystem.
ASSESSMENT TARGET	LS2 (9-11) INQ+SAE-3.	Using data from a specific ecosystem, explain relationships or make predictions about how environmental disturbance (human impact or natural events) affects the flow of energy or cycling of matter in an ecosystem.
PERFORMANCE STANDARD	LS2 (Ext)-3.	Example Extension(s): Students demonstrate an understanding of equilibrium in an ecosystem by...
GRADE SPAN EXPECTATION	3cc.	Investigating and reporting on a case study of ecosystem disruption caused by a natural event (e.g. Mississippi River delta region and hurricanes). <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
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.LS3.	Life Science: Groups of organisms show evidence of change over time (structures, behaviors, and biochemistry).
ASSESSMENT TARGET	LS3 (9-11) INQ POC-7.	Given a scenario, provide evidence that demonstrates how sexual reproduction results in a great variety of possible gene combinations and contributes to natural selection (e.g., Darwin's finches, isolation of a species, Tay Sach's disease).
PERFORMANCE STANDARD	LS3 (Ext)-7.	Example Extension(s): Students demonstrate an understanding of Natural Selection/ evolution by...
GRADE SPAN EXPECTATION	7cc.	Trace the evolution and migration of Homo sapiens. <ul style="list-style-type: none"> Earth Resources: Unit 5 Lab 9 Activity 1: Geology Dig
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.LS3.	Life Science: Groups of organisms show evidence of change over time (structures, behaviors, and biochemistry).
ASSESSMENT TARGET	LS3 (9-11) INQ FAF+POC-8.	Given information about living or extinct organisms, cite evidence to explain the frequency of inherited characteristics of organisms in a population, OR explain the evolution of varied structures (with defined functions) that affected the organisms' survival in a specific environment (e.g., giraffe, wind pollination of flowers).
PERFORMANCE STANDARD	LS3 (9-11)-8.	Students demonstrate an understanding of Natural Selection/ evolution by...
GRADE SPAN EXPECTATION	8c.	Recognizing patterns in molecular and fossil evidence, to provide a scientific explanation for Natural Selection and its evolutionary consequences (e.g. survival, adaptation). <ul style="list-style-type: none"> Earth Resources: Unit 3 Lab 5 Activity 2: Fossil Sorting and Identification Earth Resources: Unit 4 Lab 8 Activity 1: Recreating Pangaea Teacher Resource CD: Fossils and Geologic Time
DOMAIN / STATEMENT OF ENDURING KNOWLEDGE	RI.PS1.	Physical Science: All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size or amount of substance).
ASSESSMENT TARGET	PS1 (9-11) MAS+ FAF-4.	Model and explain the structure of an atom or explain how an atom's electron configuration, particularly the outermost electron(s), determines how that atom can interact with other atoms.
PERFORMANCE STANDARD	PS1 (9-11)-4.	Students demonstrate an understanding of the structure of matter by...
GRADE SPAN EXPECTATION	4b.	Writing formulae for compounds and developing basic (excluding transition elements) models using electron structure. <ul style="list-style-type: none"> Virtual Laboratory: Mineral Identification
DOMAIN / STATEMENT OF ENDURING	RI.PS2.	Physical Science: Energy is necessary for change to occur in matter. Energy can be stored, transferred, and transformed, but cannot be destroyed.

KNOWLEDGE		
ASSESSMENT TARGET	PS2 (9-11) INQ+SAE-6.	Using information provided about chemical changes, draw conclusions about and explain the energy flow in a given chemical reaction (e.g., exothermic reactions, endothermic reactions).
PERFORMANCE STANDARD	PS2 (Ext)-6.	Example Extension(s): Students demonstrate an understanding of physical, chemical, and nuclear changes by...
GRADE SPAN EXPECTATION	6aa.	Using chemical equations and information about molar masses to predict quantitatively the masses of reactants and products in chemical reactions. <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 5 Lab 9 Activity 1: Geology Dig

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