Earth Science

State Standard Number	State Standard Area / Description	Unit Name	Course Topic Description
8-9.ES.1	Nature of Science		
8-9.ES.1.1	Understand Systems, Order, and Organization		
8-9.ES.1.1.1	Explain the scientific meaning of system, order, and organization.		
8-9.ES.1.1.2	Apply the concepts of order and organization to a given system.		
8-9.ES.1.2	Understand Concepts and Processes of Evidence, Models, and Explanations		
8-9.ES.1.2.1	Use observations and data as evidence on which to base scientific explanations.	Introduction to Earth Science	Section 2, Part E
8-9.ES.1.2.2	Develop models to explain concepts or systems.	The Surface of the Earth	Lab: Erosion
8-9.ES.1.2.3	Develop scientific explanations based on knowledge, logic, and analysis.	The Surface of the Earth	Lab: Erosion
8-9.ES.1.3	Understand Constancy, Change, and Measurement		
8-9.ES.1.3.1	Measure changes that can occur in and among systems.	The Surface of the Earth	Lab: Erosion
8-9.ES.1.3.2	Analyze changes that can occur in and among systems.	The Surface of the Earth	Lab: Erosion
8-9.ES.1.3.3	Measure and calculate using the metric system.	The Surface of the Earth	Lab: Erosion

Earth Science

8-9.ES.1.4	Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State		
0	No objectives in Earth Science.		
8-9.ES.1.5	Understand Concepts of Form and Function		
0	No objectives in Earth Science.		
8-9.ES.1.6	Understand Scientific Inquiry and Develop Critical Thinking Skills		
8-9.ES.1.6.1	Identify questions and concepts that guide scientific investigations.	Introduction to Earth Science	Section 2, Part E
8-9.ES.1.6.2	Utilize the components of scientific problem solving to design, conduct, and communicate results of investigations.		

Earth Science

8-9.ES.1.6.3	Use appropriate technology and mathematics to make investigations.	The Surface of the Earth	Lab: Erosion
8-9.ES.1.6.4	Formulate scientific explanations and models using logic and evidence.	The Surface of the Earth	Lab: Erosion
8-9.ES.1.6.5	Analyze alternative explanations and models.		
8-9.ES.1.6.6	Communicate and defend a scientific argument.	The Surface of the Earth	Lab: Erosion
8-9.ES.1.6.7	Explain the differences among observations, hypotheses, and theories.	Introduction to Earth Science	Section 2, Part E
8-9.ES.1.7	Understand That Interpersonal Relationships Are Important in Scientific Endeavors		
0	No objectives in Earth Science.		
8-9.ES.1.8	Understand Technical Communication		
8-9.ES.1.8.1	Analyze technical writing, graphs, charts, and diagrams.		

Earth Science

8-9.ES.2	Physical Science		
8-9.ES.	No goals or objectives in Earth Science.		
8-9.ES.3	Biology		
8-9.ES.	No goals or objectives in Earth Science.		
8-9.ES.4	Earth and Space Systems		
8-9.ES.4.1	Understand Scientific Theories of Origin and Subsequent Changes in the Universe and Earth Systems	Interior of the Earth	Section 1, Parts C-D
8-9.ES.4.1.1	Explain the current scientific theory that suggests that the solar system formed from a nebular cloud of dust and gas.		
8-9.ES.4.1.2	Identify methods used to estimate geologic time.	Geologic Time	Both Sections 2 and 3 cover this standard.

Earth Science

8-9.ES.4.1.3	Show how interactions among the solid earth, oceans, atmosphere, and organisms have changed the earth system over time.		
8-9.ES.4.2	Understand Geo-chemical Cycles and Energy in the Earth System		
8-9.ES.4.2.1	Explain the internal and external energy sources of the earth	Interior of the Earth	Section 1, Parts B-C
8-9.ES.5	Personal and Social Perspectives; Technology		
8-9.ES.5.1	Understand Common Environmental Quality Issues, Both Natural and Human Induced	Earth's Water	Section 3, Part K
8-9.ES.5.1.1	Analyze environmental issues such as water and air quality, hazardous waste, and depletion of natural resources.	Earth's Water	Section 3, Part K
8-9.ES.5.2	Understand the Relationship between Science and Technology		
8-9.ES.5.2.1	Explain how science advances technology.		

Earth Science

8-9.ES.5.2.2	Explain how technology advances science.		
8-9.ES.5.2.3	Explain how science and technology are pursued for different purposes.		
8-9.ES.5.3	Understand the Importance of Natural Resources and the Need to Manage and Conserve Them		
8-9.ES.5.3.1	Describe the difference between renewable and nonrenewable resources.		