Grade 4: Earths Changing Surfaces

Lesson	ISI Kit Correlation	Outdoor Learning Center Activity	Skill Building Activity	Habits of Mind	Process Standards	Content Standards
Local Landforms	Lessons 1& 10- **Looking for Changes in the Earth's Surface (parts 1 & 2)**	Observe the creek at the OLC and note formations. Use our Erosion Control Demonstration Area to learn and observe how different uses of the land affect the quality of our water systems. 20 to 40 minutes	Observing and Describing	Wondering and thinking about the Natural & Physical World Observing Carefully Communicating Clearly	Nature of Science: Note Booking Nature of Science: Predicting Nature of Science: Testing	4.2.1- Erosion & deposition 4.2.2- How wind, water & ice affect Earth's surface
River Cutters	Lesson 3- Rivers Shape the Land Lesson 4- Rivers Shape the Land in Different Ways	Diatomaceous Earth and water drip bottles are used to build models of rivers and to observe the different formations created over time. 30 to 40 minutes	Observing and Describing Using Models in Science	Wondering and thinking about the Natural & Physical World Seeking Answers Through Exploration Observing Carefully Developing Critical Thinking Skills	Nature of Science: Predicting Nature of Science: Testing Nature of Science: Investigating and trials Design Process: Identify need or problem (erosion) Design Process: Test & evaluate solutions	4.2.1- Erosion & deposition 4.2.2- How wind, water & ice affect Earth's surface
Winderful	Lesson 7- Wind Erodes Hoodoos Lesson 8- Wind Deposits Dunes	Using 'windstorm' boxes to blow sand around students will explore how wind shapes the surface of the Earth through erosion and deposition. 30 to 40 minutes	Observing and Describing Using Models in Science	Seeking Answers Through Exploration Pursuing Ideas In Depth Observing Carefully Collaborating and Sharing	Nature of Science: Note Booking Nature of Science: Testing Nature of Science: Investigating and trials	4.2.1- Erosion & deposition 4.2.2- How wind, water & ice affect Earth's surface 4.2.6 Describe ways in which humans have changed the natural environment. Explain if these changes have

						been detrimental or beneficial.
Volcanoes Build Up the Earth's Surface	Lesson 11- Plate Movements Form Mountains Lesson 12- Volcanoes Build Up Earth's surface	The basics of Plate Tectonics and makeup of the Earth's layers. Using a model volcano we'll set off eruptions using vinegar and baking soda.	Observing and Describing Using Models in Science	Wondering and thinking about the Natural & Physical World Seeking Answers Through Exploration Pursuing Ideas In Depth Collaborating and Sharing Observing Carefully	Nature of Science: Testing Nature of Science: Investigating and trials	4.2.3- Volcanoes, Earthquakes change Earth's surface

Additional: Water Cycle Game (4.2.6)

Standard 2: Earth Science

Core Standard:
Observe, investigate and give examples of ways that the shape of land changes over time.
(4.2.1, 4.2.2, 4.2.3)

Core Standard:
Describe how the supply of natural resources is limited and investigate ways that humans protect and harm the environment. (4.2.4, 4.2.5, 4.2.6)

4.2.1 Demonstrate and describe how smaller rocks come from the breakage and weathering of larger rocks in a process that occurs over a long period of time.

4.2.2 Describe how wind, water and glacial ice shape and reshape earth's land surface by eroding rock and soil in some areas and depositing them in other areas in a process that occurs over a long period of time.

4.2.3 Describe how earthquakes, volcanoes and landslides suddenly change the shape of the land.

4.2.6 Describe ways in which humans have changed the natural environment. Explain if these changes have been detrimental or beneficial.