

Unit 2: The Forces of Wind and Water

WEEK 5 Lesson 2

Science and Engineering: Earth's Systems

The Forces of Wind on Land

S & E Big Ideas	Wind and water can change the shape of the land. Changes happen over time.
S & E Guiding Question	What resources can we use to understand changes in the shape of the land?
Content Objectives	I can compare the effects of water and wind on land. (2-ESS2-4(MA)) I can find patterns and connections about my observations of investigations about water and wind on Earth materials. (Practice 4, 2-ESS2-4)
Language Objective	I can describe the way wind affects the shape of land. (SL.2.2.a)
Vocabulary	dune: a ridge of sand Earth materials: the natural materials found on Earth, including minerals, rocks, soil, and water erosion: the process by which the surface of the earth is worn away by the action of water, glaciers, winds, waves, etc. topsoil: the layer of soil in which plants grow
Materials and Preparation	• Science and Engineering packets • Discussion Prompts chart • trays selected at the close of Lesson 1
Opening 1 minute	<i>Today you will use your observations from yesterday's investigation to make several comparisons.</i>
Discussion 24 minutes	Distribute Science and Engineering packets. <i>With your partner, review your notes from yesterday. Talk for a minute about your observations, and mark anything that is particularly important.</i>

	Allow the children several minutes to reread, discuss, and mark their notes. Facilitate a brief class discussion. Encourage children to refer to their notes and, as appropriate, to the trays. As they share their findings, encourage children to use established classroom discussion prompts. Focus on the wind investigation. <i>Think about the different Earth materials you used in your investigation. What was the same and different about the effects of wind on sand and on topsoil?</i> Compare the effects of water and wind on the Earth materials. <i>We investigated sand and topsoil in different ways: with water and with wind. What was the same and different about how water and wind shaped the sand?</i> <i>What was the same and different about how water and wind shaped the topsoil?</i> <i>What patterns and connections can we identify in our data about the effects of wind and water on earth materials?</i> <i>What conclusions can we make?</i> <i>How do you think this affects humans and animals?</i>
Closing 5 minutes	Refer to the final self-assessment question at the bottom of the page. <i>Take a moment to reflect on today's discussion. Ask yourself this question: Did I share science and engineering ideas by talking, writing, drawing, or building something?</i> <i>Over the last three weeks we have conducted investigations to understand how water and wind shape land. In real life these are usually very slow processes—they can take hundreds or even thousands of years. In most cases we are not able to see the changes from day to day. Now when you visit a place and see the shapes of the land, you can think about how water and wind formed those shapes.</i> <i>This week in the Discovery Studio you will investigate which type of erosion is shaping a landform.</i> At the close of this lesson, both sand and topsoil can be added to the class Landforms and Water Table for use during Studios.
Standards and	SL.2.2.a Recount or describe key ideas or details from a text read aloud or

Practices	information presented orally or through other media. 2-ESS2-1: Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.
Ongoing assessment	Reflect on the class discussion. What do children understand now about water erosion? What do children understand now about wind erosion? What do children understand now about the effects of wind and water on different Earth materials? What misconceptions persist, and what experiences will help to address them?

Notes	
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