

Unit 2: The Forces of Wind and Water

WEEK 5 Day 5



Text Talk Moving Away from the Edge (slides) and Unit Question Chart

Big Ideas	Wind and water can change the shape of the land. The changing shape of the land impacts people. Changes happen over time.
Weekly Question	How can wind change land, and why does it matter? (Preview to Week 6: How do people interact with the land?)
Content Objectives	I can determine some main topics and key details in a text about erosion. (R.4.2, R.5.2.b) I can describe how people responded to the erosion of the land surrounding Gay Head Lighthouse. (2.T2.4) I can evaluate approaches to erosion. (2-ESS2-1)
Language Objective	I can state reasons for responding to erosion in particular ways. (SL.3.2.a)
SEL Objective	I can reflect on the unit so far and evaluate unit ideas with my classmates. (Relationship Skills, Decision Making)
Vocabulary	beam: a long and straight piece of metal construct: to build edge: the part where an object or area begins or ends lighthouse: a tower with a powerful light that is built on or near the shore to guide ships away from danger path: a cleared way to walk * warn: to tell of a possible danger, to alert

Text Talk U2 W5 D5

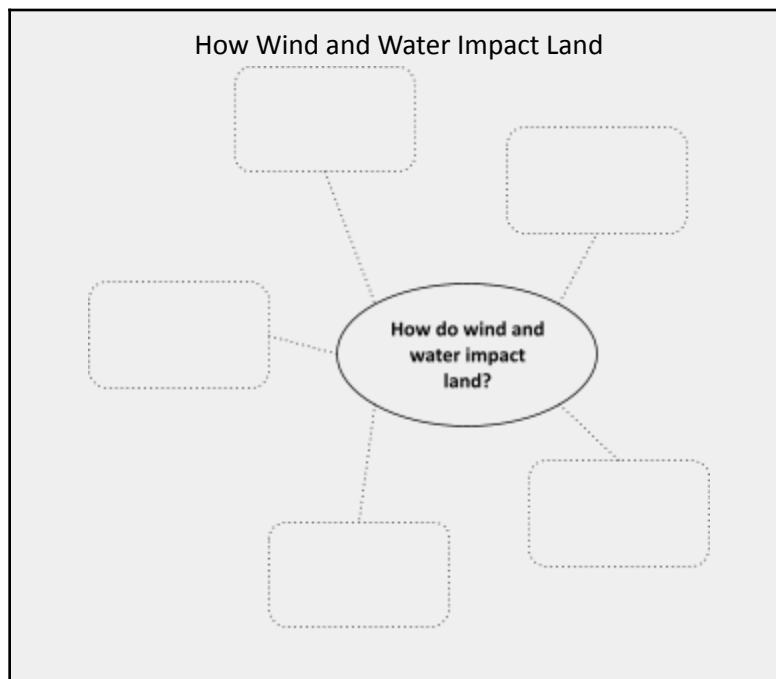
Materials and Preparation

- Moving Away from the Edge slides
- projector and screen
- Moving Away from the Edge text, copy for each child

Children will read the text with strategically-assigned partners.

Review the Unit Question Chart routine in the Introduction, Part 2: Components.

- Weekly Question charts from Weeks 1-5
Review the charts and notice particularly important ideas and themes that have surfaced. Look especially for ideas that connect to and build upon each other over the course of the weeks. Consider categories by which ideas might be grouped, such as The Force of Rain on Land or How Wind Changes Land (but do not write these on the chart).
Before the lesson, post the Weekly Question charts so that they are all visible for the whole group.
- chart paper
Create the How Wind and Water Impact Land chart. In the center of the paper, write the unit question: How do wind and water impact land?



Note: the number of boxes will be determined by the conversation with the children. There are six big ideas in the unit, and the boxes might or might not correspond to these. Plan for about 5-8 boxes on the chart.

Opening 4 minutes	Show slide 2. <i>Before we begin today, it's important to understand what a lighthouse is. Turn and talk with a partner about anything you know about lighthouses.</i> Harvest a few ideas from the group, and emphasize those that include a correct definition. Note that a lighthouse is important because it warns or guides people in boats and ships in locating, or finding, the edge of the land. This keeps people and boats safe.
Text and Discussion 16 minutes	Distribute the Moving Away from the Edge text sheets. <i>Read just the first two paragraphs with your partner. Talk with your partner. What did you learn about erosion at the edge of the sea?</i>
slide 3	Pause the partner reading to look at slide 3. Children can look at the same photo on their sheets as well. <i>Sometimes, this happens: This is a photo from the coast of the US, in a place called Plum Island. What do you notice in this photo?</i> <i>Read the last paragraph together. What was this paragraph mostly about?</i> <i>Turn and talk to a partner about what it would be like to live next to the sea... And what decisions you might make with your knowledge about erosion.</i> Harvest a few ideas in the whole group. Children may express judgments about people who build close to the water. Steer the conversation towards decisions people make, and away from personal judgments on people who make them.
slide 4	<i>Let's focus on the slides now.</i> <i>We began talking about lighthouses. Of course, a lighthouse <u>must</u> be built close to the edge of the land in order to do its job: to warn ships at sea that they are close to the land.</i> <i>This lighthouse is on an island called Martha's Vineyard, which is a part of the state of Massachusetts. The town where the lighthouse stands is called Aquinnah, so named by the Wampanoag people</i>

	<i>who lived there for hundreds of years.</i>
slide 5	<i>This photograph was taken in 1958, about 65 years ago. Looking at this photograph, based on what we know about erosion, what might you predict about the land where the lighthouse stands?</i>
slide 6	<i>You are right: because of the eroding cliffs, this lighthouse was standing very close to the water. The lighthouse keeper—the person who keeps everything working and the light shining—worried that the lighthouse was going to tumble into the water if it wasn’t moved.</i> <i>They did not have a plan to slow or prevent erosion, so, as you can see here, they moved the lighthouse back in 2015!</i>
slide 7 - 8	<i>The lighthouse was moved back from the edge of the cliff—very slowly, very carefully, by experts—by sliding it along two metal beams.</i>
slide 9	<i>Look how far back they moved the lighthouse!</i>
slide 10	<i>Let’s read the caption for this photo.</i> Spend some time unpacking the caption, adding emphasis: <i>The building, which weighs in at 400 tons, traveled along metal I-beams on a path chosen for both its elevation and for the stability of the clay. Project managers said they hope the new location will be stable for another 150 years.</i> Previous texts, science lessons, and investigations at the Landforms and Water Table have highlighted how the makeup of the earth impacts erosion (in this case, sand and clay). Remind children of these understandings as the discussion unfolds. <i>How stable do you think sand and clay are for the foundation of the lighthouse?</i>
Key Discussion 9 minutes	Think, Pair, Share. <i>What might happen to this lighthouse in another 150 years?</i> Harvest children’s ideas.
Closing 1 minute	<i>Today we read and discussed images to find out what might happen if people build structures close to the shore. We will continue to think about how the changing land impacts people, and what people can do about it. We’ll also keep talking about what people <u>should</u> do to respond to the forces of water and wind on the land.</i>

Weekly Question Chart 2 minutes	Read the Week 5 Weekly Question Chart. Quickly note 1-2 essential ideas.
Unit Question Chart 8 minutes	<i>We've been thinking about the forces of wind and water on land for a few weeks now. Let's look back at some of the ideas we've had so far and see how we can make sense of them all together.</i> Read the highlighted ideas on each Weekly Question Chart. <i>Today we are going to work on a new chart to help us think about all our ideas about the forces of wind and water on land. Let's see if we can find patterns in our thinking and if they can help us answer a big question: How do wind and water impact land?</i> Model synthesizing ideas. Refer to ideas that have been marked with similar colors. <i>These three ideas are all about how the ocean wears away at the shore. That makes me think: Oceans can erode the shore and change the way it looks. I am going to write that sentence in a box on our chart.</i> On the How Wind and Water Impact Land chart, draw a box, write the sentence, and draw a line connecting the box to the question in the center. With children, create 4-7 more sentences that synthesize different ideas from the Weekly Question Charts. Record each sentence in a separate box on the How Do Wind and Water Impact Lands chart. This chart will be added to in Week 8.
Standards	R.4.2 Ask and answer questions about who, what, when, where, how and why. R.5.2.b Identify the main topic of a multi-paragraph text and the central ideas of specific paragraphs. SL.3.2.a Describe people, places, and things, tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences. 2.T2.4. Explain and describe human interaction with the physical world (the environment). 2-ESS2-1. Investigate and compare the effectiveness of multiple solutions designed to slow or prevent wind or water from changing the shape of the land. SEL. Relationship Skills SEL. Decision Making

Ongoing assessment	During this discussion, take note of how children respond to the particular problem of erosion related to buildings at the shoreline. Do they differentiate between kinds of buildings? What questions do they ask? How do children describe the ways people responded to the changing environment around the lighthouse? Do children take a strong stance about approaches to erosion? If so, do they use evidence to support their thinking? Observe the Unit question chart. How are children synthesizing ideas about the forces of wind and water?
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Notes
