

Unit 2: The Forces of Wind and Water

WEEK 7 Day 5

Text Talk Choosing a Recommendation for Popham Beach

Big Ideas	Wind and water can change the shape of the land. People can change the shape of the land. The changing shape of the land impacts people.
Weekly Question	How can people prevent or slow erosion?
Content Objectives	I can apply my knowledge of approaches to erosion to make a recommendation for erosion on Popham Beach. (2-ESS2-1). I can use evidence from investigations to support my claim. (W.1.2.b, W.3)
Language Objective	I can recount my experiences in Science and Engineering, Text Talk, and Studios to make a recommendation for Popham Beach. (SL.4.2)
SEL Objective	I can discuss differing opinions in a respectful way and make decisions about approaches to slowing erosion at Popham Beach. (Relationship Building, Decision Making)
Vocabulary	approach (n): a way of doing or dealing with something (*Week 4) data : information * intervene : to become involved in something to change what happens * recommendation : suggestion
Materials and Preparation	The children will work in five groups for this lesson, with each group discussing one of the Slowing and Preventing Erosion charts (the Restore the River chart will be discussed by the whole class). Before the lesson, assign children to groups, matching them, as possible, to approaches that they have tested. all Slowing and Preventing Erosion charts

	Before the lesson, add to the bottom of each chart, using the following example. Slowing and Preventing Erosion Approach: <i>planting</i> Reason: <i>to keep the soil in place</i> Example(s): <i>planting schoolyard gardens in New Orleans</i> - <i>Cape Cod - beach</i> - <i>North Dakota - prairie</i> - <i>Vietnam - farm</i> - <i>Kenya - farm</i> - <i>Marram grass on a beach</i> - <i><u>Soil Erosion and How to Prevent It</u>, page 25</i> Will this work on Popham Beach? Yes No Maybe Why or why not? ● Science and Engineering packets used to record observations from Week 6 and Week 7 investigations ● markers ● Problem at Popham Beach slides, from Week 6, Day 2, for children's reference ● Weekly Question Chart
Opening 1 minute	<i>Now that we have tested different approaches to slowing and preventing erosion, we are ready to think about which approach would work best on Popham Beach. Today we will review each approach to decide if it would work on Popham Beach and why or why not. Then, we will review all of the possible approaches and choose the one that we think would be most effective.</i>
Text and Discussion	<i>Let's go through the process as a class with one approach. Then you will work in small groups to discuss the other approaches.</i> Review the Restore the River chart. <i>Will this approach work at Popham Beach? [No]</i>

Restore the River Chart 4 minutes	<i>Why not?</i> [Popham Beach is not a river and cannot be restored in the same way the Muddy River was.] If needed, take a moment to clear up any misunderstandings.
Small Group Decision Making 19 minutes	<i>Now you will work in small groups to have these conversations about other approaches. There are five more approaches to explore.</i> <i>As a group, review the approach on the chart. Think about the examples of places where this approach is used. Then think about investigations you conducted to test this approach, and review your notes. As a group, decide together whether this approach will work at Popham Beach, and circle Yes, No, or Maybe. Then, use data from your investigations to write why this approach will, will not, or might work.</i> Distribute Science and Engineering packets, and send the children to work for about twelve minutes. As they work, circulate to support them. Encourage children to refer to data from their investigations. When the groups have finished, gather the class back together.
Whole Group Decision Making 10 minutes	Collect all of the charts, separating those that would not and those that would or might work at Popham Beach. Refer to approaches that children have determined would not work at Popham Beach. <i>Some of you have determined that your approaches would <u>not</u> work on Popham Beach.</i> Invite these groups to briefly share their thinking. Record any additional ideas at the bottom of corresponding charts. <i>You did some good thinking to arrive at your conclusions, and you have helped us all narrow down the possibilities of what we might recommend.</i> Refer to approaches that children have determined would or might work at Popham Beach. <i>These are approaches that our investigations tell us <u>could</u> work at Popham Beach. Our job now is to choose which we think would be the most effective approach.</i> Invite these groups to briefly share their thinking. Record any additional ideas at the bottom of corresponding charts. <i>Take a moment to think, and then turn and talk to a partner.</i>

	<i>Let's talk about this all together.</i> Engage the class in a discussion about which approach would be the most effective for Popham Beach. During the discussion, prompt the children to cite evidence from their investigations to support their claims. As is useful, remind children about approaches that have previously been tried at Popham Beach (barriers: seawalls and dikes) and ask them to consider this in their thinking. After choosing one approach, add under the Why? section of the chart any new reasons and evidence that surfaced during the discussion.
Closing 1 minute	<i>We have learned a lot about the ways people respond to erosion, and now we have a recommendation for how to slow erosion at Popham Beach: _____ [name chosen approach]. Next week we will decide on the best way to communicate our recommendation to other second graders—and to people who work at and make decisions about Popham Beach.</i>
Weekly Question Chart 5 minutes	Refer to the Weekly Question Chart. Read the chart together. Add any essential ideas that may be missing. Identify and color-code two or three themes that emerge. Some themes might be: Sometimes the best approaches to erosion are to intervene with nature. Sometimes the best approach to erosion is to do nothing. Save this chart for use in Week 8.
Standards	W.1.2.b Gather information from provided sources and/or recall information from experiences in order to answer questions. W.3 Routinely produce a variety of clear and coherent writing in which the development, organization, and style are appropriate to the task, audience, and purpose SL.4.2 Produce complete sentences when appropriate to the task and situation in order to provide the requested detail or clarification. 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 Building SEL. Decision Making
Ongoing assessment	Take notes about children's discussions, focusing on the following questions: How effectively do children argue for their ideas? How do children negotiate choosing one idea for the group? Are children's ideas appropriate for the audience?

	Do children’s reasons effectively support their arguments?
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