

Unit 2: The Forces of Wind and Water

WEEK 8 Lesson 1

Science and Engineering: Earth's Systems

Communicating a Recommendation for Popham Beach

Big Ideas	Wind and water can change the shape of the land. The changing shape of the land impacts people. 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 work with a group of my peers to present a scientific recommendation in writing. (W.1.2.a) I can make a claim about how well an approach works at slowing or preventing erosion and support it with evidence. (2-ESS2-1, Practice 7)
Language Objective	I can discuss group work with my peers in order to reach a shared understanding and collaborate on a finished product. (SL.1.2)
Vocabulary	entice: to draw the reader in; make the reader want to know more recommendation: suggestion replicate: to copy, repeat
Materials and Preparation	Before the lesson, review Writing a Scientific Research Article (http://www.columbia.edu/cu/biology/ug/research/paper.html) for guidance. This guidance describes the kinds of information (in a different format, and minus the abstract) to be included in the recommendation poster. Children will work in six groups, one for each part of the poster. Assign children to groups based on review of: their work during the unit, developing understandings, social relationships, and the potential contributions and needs specific to each element of the poster (organizing material, writing, neatness, drawing/graphic design, etc.). If possible, also include in each group at least one child who conducted an investigation to test the class' recommended approach for Popham Beach. Make a list or chart, for adults' and children's reference, identifying tasks and groups:

	<table border="1"> <thead> <tr> <th><u>Task</u></th><th><u>Group members</u></th></tr> </thead> <tbody> <tr> <td>Title and Authors</td><td></td></tr> <tr> <td>Introduction</td><td></td></tr> <tr> <td>Materials and Methods</td><td></td></tr> <tr> <td>Diagram</td><td></td></tr> <tr> <td>Results</td><td></td></tr> <tr> <td>Discussion</td><td></td></tr> </tbody> </table> • Communicating Our Recommendation packet, 2 copies • writing and drawing tools • chart paper • tape Identify children’s Science and Engineering packets that include clear and successful completion of the following pages, corresponding to the chosen class recommendation, for children’s reference. ○ Slowing Erosion Investigation Planning sheet ○ Slowing Erosion Investigation sheet ○ Replicating Experiments Supply each poster group with these pages or copies of them. Talk with colleagues and arrange to share the completed poster with another second-grade class, either at the school or at another school (via photos, Zoom, or other means).	<u>Task</u>	<u>Group members</u>	Title and Authors		Introduction		Materials and Methods		Diagram		Results		Discussion	
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Opening 13 minutes	Gather the children in the meeting area, arranged in six groups. <i>At the end of last week, during Text Talk, we decided that [approach chosen by the class] is the approach we will recommend for slowing erosion at Popham Beach. This week, we will communicate our recommendation to another second-grade class.</i> <i>Scientists share their ideas in different ways. Last week, five groups of scientists shared their investigation results. Scientists also share their ideas through writing and publishing journal articles and creating posters, often to use at conferences.</i>														

	<i>Today we will work together to organize the information we need for our recommendation and prepare to present it.</i> <i>We'll communicate our recommendation for Popham Beach by making a poster. You will work in small groups; each group will create one part of the poster, and then we'll put all the pieces together.</i> Introduce each page of the Communicating Our Recommendation sheets: <u>Title and Authors</u> <i>One group will write the title and authors. When scientists present their findings, they write titles that entice the audience and provide information about their investigations. After the title, they list the authors of the study. This group will also work on the layout of the poster.</i> <u>Introduction: What is the problem?</u> <i>Another group will write the introduction. The introduction includes information about the question we had and the problem we set out to solve: What is happening on Popham Beach? Why did we do these investigations?</i> <u>Materials and Methods</u> <i>This group will record the materials used in the investigation, the predictions we made, and how we conducted the investigation. This information will help other second graders with their own investigations if they decide to replicate ours.</i> <u>Diagram</u> <i>The Diagram group will draw how the investigation was set up, including the shape and location of the island and the shape and location of the approach.</i> <u>Results: What happened?</u> <i>This group will draw and write about the results of the investigation: what happened to the island as we conducted our investigations?</i> <u>Discussion: What do the results tell us?</u> <i>The final group will write about what our results show: Why this is the best approach for Popham Beach.</i>
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	<i>Remember that we want to create a poster that entices readers and communicates our recommendation clearly to our audience—other second graders.</i>
Small Group Work 15 minutes	Refer to the list or chart to identify groups, and send each group to work with writing tools, investigation pages, and the relevant page from a Communicating Our Recommendation packet. As the children work, circulate to support them. When the Title and Author group finishes with their page, give them a sheet of chart paper, tape, and the second Communicating Our Recommendation packet. They will use these to design the poster's layout, discussing where each part will effectively go and then taping the sections to the paper temporarily; these will be replaced with each group's completed section.
Closing 2 minutes	Organize each group's work in progress, including the packet pages they are using for reference, for continued work in Lesson 2. <i>Today, you began communicating our Popham Beach recommendation. You will have time to finish working tomorrow.</i> Share the plan for exchanging recommendation posters with another second-grade classroom as part of closing Unit 2: The Forces of Wind and Water.
Standards and Practices	W.1.2.a Investigate questions by participating in shared research and writing projects. SL.1.2 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups. 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.
Ongoing assessment	Observe and take notes as the children work in small groups. How do the children translate notes from investigations into writing for an audience? To what extent does the children's work reflect the purpose of each part of the poster (for example, a descriptive title that entices the reader)? Which parts need refining?