

Unit 2: The Forces of Wind and Water

WEEK 7 Lesson 3

Science and Engineering: Earth's Systems

Presenting Investigations about Slowing and Preventing Erosion

S & E 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 Objective	I can make a claim about how well an approach to slowing and preventing erosion works and support my claim with evidence.															
Language Objectives	I can present my investigation orally. I can ask questions about and provide feedback on my classmates’ investigations.															
Vocabulary	approach: a way of doing something replicate: to copy, repeat															
Materials and Preparation	● sticky notes ● trays and Science and Engineering packets chosen in Lesson 2 ● chart paper and markers Create a chart, Replicating Investigations, with each of the five approaches: <table><tr><th colspan="5">Replicating Investigations</th></tr><tr><th>Barriers</th><th>Planting</th><th>Walls</th><th>Windbreaks</th><th>Terracing</th></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	Replicating Investigations					Barriers	Planting	Walls	Windbreaks	Terracing					
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	On the whiteboard, write: Which approach did you test? What happened during the investigation? What worked well? What did not work well? ----- What feedback would help make this investigation more effective?
Opening 2 minutes	<i>You have been doing a lot of exciting investigations to test different approaches for slowing erosion at Popham Beach. Today we will hear about five investigations—one for each approach. Scientists share their investigations in different ways. One way is by presenting at a conference. We are going to have a small scientific conference to share your claims about your investigations.</i> Refer to the questions on the board. <i>When your group shares, you will answer these questions. Then there will be time for your classmates to give you feedback on the investigation.</i>
Discussion 25 minutes	One group at a time and using the questions on the board, invite children to present their investigations and related claims (five minutes per group). At the end of each presentation, provide time for classmates to ask questions (Why did you...?) and to give feedback (You could try...). Record questions and feedback on sticky notes and put them in corresponding Science and Engineering packets.
Closing 3 minutes	<i>Scientists often try their own investigations again; they also try to replicate, or copy, each other’s investigations to see if they get the same results. Take a moment to think about what you would do if you were to replicate an investigation.</i> Note: You may choose to continue investigations in a Day 4 lesson.
Standards and Practices	2-ESS2-2. Map the shapes and types of landforms and bodies of water in an area. Clarification Statements: • Examples of types of landforms can include hills, valleys, riverbanks, and dunes. • Examples of water bodies can include streams, ponds, bays, and rivers. • Quantitative scaling in models or contour mapping is not expected. 2.K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same design problem to compare the strengths and weaknesses of how each object performs.* Clarification Statements: • Data can include

	observations and be either qualitative or quantitative. • Examples can include how different objects insulate cold water or how different types of grocery bags perform.
Ongoing assessment	Take notes as the children present and analyze investigations. What do the children identify as going well in the investigations? Why? What do they identify as not going well? What kinds of questions do children ask? What is the quality of feedback they provide?

Notes