




<p>Weekly Question: How do people interact with the land?</p>			
<p>Texts</p>    	<p>Vocabulary and Language Days 1 & 2: Introduce Weekly Words: <i>determine, expose, interact, preserve, remove, shape (v), soak, uninhabited</i> Day 3: General Nouns Day 4: General Nouns Day 5: Answering a Weekly Question</p>		
	<p>Text Talk Day 1: teacher choice for text Day 2: A Problem on Popham Beach Day 3: <i>Erosion: Changing Earth’s Surface</i> and <i>Soil Erosion and How to Prevent It</i> Day 4: “What Can Grass Do?” (slides) Day 5: <i>Soil Erosion and How to Prevent It</i></p>		
	<p>Stations Guided Independent Reading</p> <hr/> <p>Listening & Speaking: Listen & Respond (<i>How Do Wind and Water Change Earth?</i>) Science Literacy: How did water and wind change my quadrant? Vocabulary: Choose 3!, Talk About It Word Work: choose from activities Writing: follows from Text Talk Days 1 and 3</p>		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 60%;"> <p>Science and Engineering (2 days) Lesson 1: Quadrat Study 4 Lesson 2: Testing Approaches to Slowing and Preventing Erosion: Barriers and Planting</p> </td> <td style="width: 40%;"> <p>Studios: Popham Beach Project Children use materials to begin to explore their ideas about slowing erosion. Specific work in studios will depend on projects taken on by individuals and small groups.</p> </td> </tr> </table>	<p>Science and Engineering (2 days) Lesson 1: Quadrat Study 4 Lesson 2: Testing Approaches to Slowing and Preventing Erosion: Barriers and Planting</p>	<p>Studios: Popham Beach Project Children use materials to begin to explore their ideas about slowing erosion. Specific work in studios will depend on projects taken on by individuals and small groups.</p>
<p>Science and Engineering (2 days) Lesson 1: Quadrat Study 4 Lesson 2: Testing Approaches to Slowing and Preventing Erosion: Barriers and Planting</p>	<p>Studios: Popham Beach Project Children use materials to begin to explore their ideas about slowing erosion. Specific work in studios will depend on projects taken on by individuals and small groups.</p>		
	<p>Writing: Explanation Day 1: Feedback and Revision: Explanation Steps Day 2: Deconstruction and Revision: Verbs Day 3: Deconstruction and Revision: Nouns and Adjectives Day 4: Individual Construction: Completing Captions and Phenomenon Statement Day 5: Individual Construction</p>		

Unit 2: The Forces of Wind and Water

WEEK 6 Days 1 & 2

Vocabulary & Language
Weekly Words

Weekly Question	How do people interact with the land?
Language Objectives	I can talk with my classmates about words. (SL.1.2) I can define and use new words. (L.5) I can connect words to my own real-life experiences. (L.5.2.a)
Vocabulary	determine: to come to a conclusion expose: to uncover interact: to have an effect on or change one another preserve: to keep safe from harm or loss remove: to take away from shape (v): to give a certain form or shape to, to mold soak: to make completely wet uninhabited: not lived in
Materials and Preparation	Choose four words to teach each day, following the steps of the Weekly Words routine. <ul style="list-style-type: none"> ● Week 6 Weekly Words cards ● chart paper Create the week’s Weekly Words chart by writing out the Weekly Words and their definitions. Add icons, sketches, or images as needed.
Opening Day 1	<p><i>This week’s Weekly Words are ones we can use to talk about not just land but the ways people interact with it. Today’s words are: _____, _____, _____, and _____.</i></p> <p>As children rate their knowledge of each word, ask a few children to share their ideas about the word. Use this opportunity to highlight connections, similarities, and differences to other words used in the classroom,</p>

	<p>remarking on parts of speech and morphology and affirming children’s word knowledge.</p> <p>As children respond to the Think, Pair, Share prompts, encourage them to use the word as they speak. Offer sentence stems where it might be helpful.</p>
Day 2	<p><i>Let’s continue learning our words for this week. Today’s words are: _____, _____, _____, and _____.</i></p>
Teaching the words	<p>determine (verb) Elaboration: <i>This woman is looking at her watch. She might be trying to determine how much time she has been exercising. Or she might be reading her watch to determine, or find out, how far she has run. She is using information from the watch to collect information she needs.</i></p> <p>Think, Pair, Share prompt: <i>How do you determine when lunch time will be? What information do you use to find this out?</i></p> <hr/> <p>expose (verb) Elaboration: <i>Erosion can expose the roots of a tree.</i></p> <p>Think, Pair, Share prompt: <i>What parts of our faces do we expose when we take off our masks?</i></p> <hr/> <p>interact (verb) Elaboration: <i>During the pandemic, we have learned to interact with each other in new ways. Instead of talking together in person, we sometimes talk online. We learned to interact online. When we interact, you do something, and that affects what I do next. For example, one of us asks a question, and that affects what the next person says.</i></p> <p>Think, Pair, Share prompt: <i>How do you interact with people in the place where you live? How do you interact with people on a bus or in a store?</i></p> <hr/> <p>preserve (verb) Elaboration: <i>One way to have fresh berries in the winter is to freeze them in the</i></p>

summer. Freezing food preserves it, or keeps it safe to eat. Food is also preserved in cans and jars.

Think, Pair, Share prompt:

Why might it be important to preserve food?

What is something else that is important to preserve? Why?

remove (verb)

Elaboration:

Some things are easy to remove—for example, it is easy to remove a dish from the table—to take it away and put it in the sink.

Some things are difficult to remove—like this coffee stain on the rug.

Think, Pair, Share prompt:

Why might people remove a tree stump from an area of land?

shape (verb)

Elaboration:

Here someone shapes bread dough with their hands. They push and pull it so that it looks the way they want it to—maybe a long, thin loaf of bread or maybe a round one. Hands are the force that shapes the bread.

Think, Pair, Share prompt:

What are some forces that shape the land, and how does that happen?

soak (verb)

Elaboration:

People soak dry beans to get them ready to cook. These beans are in a bowl full of water, so each bean is all the way wet.

*In the second picture someone is pouring water on the seedling so that the soil around it is **soaked** to make sure the seedling's roots have as much water as the plant needs. When we add the suffix -ed to the verb "soak" we get an adjective that describes something: soaked.*

Think, Pair, Share prompt:

What is a material that is easy to soak? Why do you think that is so?

Or:

When you take a bath or shower, what gets soaked?

uninhabited (adjective)

Elaboration:

	<p><i>Think about the word habitat—a place where animals and plants live. Do you hear part of that word in this one, uninhabited? The suffix un- means “not.” Uninhabited is a place where no one lives. An uninhabited place might be a house or apartment building, or a piece of land, like an island, where no one lives.</i></p> <p>Think, Pair, Share prompt: <i>If you discovered an uninhabited place, what would you be curious to investigate there?</i></p>
Closing	<p><i>This week we are thinking about how people interact with the land. The words we’re studying this week will help us to talk about this, our texts, and other experiences we’re having together.</i></p>
Standards	<p>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.</p> <p>L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings sufficient for reading, writing, speaking, and listening.</p> <p>L.5.2.a Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy).</p>
Ongoing assessment	<p>Use information gathered from each lesson to plan for embedded opportunities for teaching and reinforcing words.</p> <p>How do children interact with new and familiar words? Are they playful, curious, perplexed, disengaged? Do children connect words to personal experiences? What connections do children make between words they are learning and familiar words? How do children respond when they discover an error in their understanding or use of a word? How flexible are they when confronted with new definitions? How do children talk with peers about new words—do they use gestures, substitute familiar words, dig for descriptions, tell stories?</p> <p>Keep a list to follow each child’s vocabulary growth over time.</p>



determine

verb

<https://www.techradar.com/best/running-watches>



expose

verb

<https://www.groundsguys.com/blog/2019/october/how-to-fix-exposed-tree-roots/>

Weekly Words U2 W6

Focus on Second/ 2nd Grade for ME | Boston Public Schools Department of Early Childhood P-2/

Maine Department of Education



interact

verb

https://www.oise.utoronto.ca/oise/News/2020/Connecting_during_COVID-19_Jackman_Lab_School_keeps_their_students_on_the_learning_curve.html



preserve

verb

<https://momsavesmoney.net/2016/07/how-to-freeze-berries.html>

Weekly Words U2 W6

Focus on Second/ 2nd Grade for ME | Boston Public Schools Department of Early Childhood P-2/

Maine Department of Education



remove

verb

<https://www.coit.com/top-five-carpet-stains>,
<https://www.rochesterstumpremoval.com/blog/how-to-remove-a-tree-stump-by-hand>



shape

verb

<https://www.americastestkitchen.com/kids/recipes/how-to-knead-and-shape-bread-dough>

Weekly Words U2 W6



soak

verb

<https://www.humnutrition.com/blog/how-to-soak-beans/>,
<https://www.gardeningknowhow.com/special/children/how-does-water-affect-plant-growth.htm>



uninhabited

adjective

<https://www.riverfronttimes.com/newsblog/2018/03/01/board-bill-would-remove-mckee-exemption-for-code-violations>

Weekly Words U2 W6

Focus on Second/ 2nd Grade for ME | Boston Public Schools Department of Early Childhood P-2/

Maine Department of Education

Unit 2: The Forces of Wind and Water

WEEK 6 Day 3

Vocabulary & Language

General Nouns

Weekly Question	How do people interact with the land?
Language Objective	I can identify general nouns. (L.1.2.a, L.1.2.b)
Vocabulary	general: naming a group; not specific noun: a word that names a person, place, thing, or idea
Materials and Preparation	<ul style="list-style-type: none">General Nouns slides Note: This lesson uses slides 1-5.
Opening	<i>Today we are going to learn about a language feature authors use when they are writing reports and explanations.</i>
Discussion slide 2	<i>When authors write about a whole group of things, they use general nouns.</i> <i>In these books Natalie Hyde writes about all landforms and bodies of water, not just one landform or body of water in particular.</i>
slide 3	<i>Natalie Hyde uses the general noun “landforms” to talk about all landforms.</i> <i>The word “landforms” is plural—it has an -s at the end. Using the plural form of this noun shows that Natalie Hyde is talking about all landforms, not just one in particular. This makes it a general noun.</i>
slide 4	<i>Let’s look for more general nouns.</i> <i>Follow along as you listen to this page. Give a thumbs up if you hear a general noun.</i>
slide 5	<i>Is this what you found?</i>

	<p><i>“Rivers,” “streams,” “lakes,” “oceans,” “channels,” “canyons, and “distances” are general nouns. They are all plural and end with -s. These nouns refer to a group of things, rather than one in particular.</i></p> <p><i>Soil and sand are also general nouns, even though they don’t end with -s. When you say the words soil and sand, they already refer to many particles of soil and sand, so they do not need an -s at the end to make them general nouns.</i></p>
Closing	<p><i>Today we learned about and identified general nouns. We will be doing more of this work during Writing today. Tomorrow during Language you will say and write your own sentences that include general nouns.</i></p>
Standards	<p>L.1.2.a Use collective nouns (e.g., group). L.1.2.b Form and use frequently occurring irregular plural nouns (e.g., feet, children, teeth, mice, fish).</p>
Ongoing assessment	<p>Reflect on the class discussion. Do children accurately identify the general nouns? What do they understand about general nouns? What are their confusions? What do children understand about forming plural nouns?</p>

Notes	
--------------	--

Unit 2: The Forces of Wind and Water

WEEK 6 Day 4

Vocabulary & Language
General Nouns

Weekly Question	How do people interact with the land?
Language Objective	I can write using general nouns. (L.1.2.a, L.1.2.b)
Vocabulary	general: naming a group; not specific noun: a word that names a person, place, thing, or idea
Materials and Preparation	<ul style="list-style-type: none">• General Nouns slides, from Day 3• paper and pencil, one for each child
Opening	<i>Yesterday we learned about general nouns, during Language and Writing lessons. Today you will use what you know about general nouns to write sentences.</i>
Discussion slide 3	<i>Remember, Natalie Hyde uses the general noun “landforms” to talk about <u>all</u> landforms. She uses the plural form of the noun “landform,” which ends in -s.</i>
slide 6	<i>Today you will use general nouns to write three sentences about a type of landform or body of water you have learned about.</i> <i>Look at the pictures for ideas. Choose a type of landform or body of water to tell and write information about. Think of three pieces of information about that type of landform or body of water. Tell your three sentences to a partner.</i> Give children time to think and to share sentences with their partners.
slide 7	<i>Now you will write the three sentences that you said. After you write your sentences, go back and underline the general nouns. If you find you did not use general nouns, go back and revise your sentences to include them.</i>

	Send the children to write. Circulate to support them with writing information using general nouns.
	Bring the class back together. Invite a child to share their sentences. As a class, discuss the information presented and how the use of general nouns demonstrates that the child is writing about <u>all</u> of that type of landform or body of water, rather than one in particular. Repeat the process with other children, as time allows.
Closing	<i>Today you wrote sentences using general nouns to give information about a type of landform or body of water.</i>
Standards	L.1.2.a Use collective nouns (e.g., group). L.1.2.b Form and use frequently occurring irregular plural nouns (e.g., feet, children, teeth, mice, fish).
Ongoing assessment	Review children’s written sentences. Do they accurately write using general nouns? What information do they provide about the type of landform/body of water?

Notes

Unit 2: The Forces of Wind and Water

WEEK 6 Day 5

Vocabulary & Language
Answering a Weekly Question

Weekly Questions	<p>Week 5: How can wind change land, and why does it matter?</p> <p>Week 6: How do people interact with the land?</p>
Language Objective	I can use new words to discuss a particular question with my classmates. (SL.1.2, L.6.2.a)
Vocabulary:	<p>batter: 1. to beat hard again and again; 2. to damage by beating</p> <p>destroy: to ruin completely</p> <p>grind: to crush or make by crushing into very small pieces or a powder</p> <p>particle: a tiny amount or piece</p> <p>transform: to change the form, look, or shape of something</p> <p>warn: to tell of a possible danger, to alert</p> <p>weather (v): to change from being exposed to weather such as wind, rain, or sleet</p> <p>weathering: what happens when a part of a rock is loosened by nature; the breakdown of landforms into smaller pieces</p>
Week 5	
Week 6	<p>determine: to come to a conclusion</p> <p>expose: to uncover</p> <p>interact: to have an effect on or change one another</p> <p>preserve: to keep safe from harm or loss</p> <p>remove: to take away from</p> <p>shape (v): to give a certain form or shape to, to mold</p> <p>soak: to make completely wet</p> <p>uninhabited: not lived in</p>
Materials and Preparation	<ul style="list-style-type: none"> ● Week 6 Answering a Weekly Question sheets, one for each small group ● pencils, one or two for each small group ● Weekly Questions for Weeks 5 and 6, printed or projected ● Weekly Words cards for Weeks 5 and 6

	<ul style="list-style-type: none"> • chart paper and markers (2 different colors) <p>Strategically assign children to groups of four, and plan where each group will work around the classroom.</p>
Opening	<i>This week we will use the Answer a Weekly Question routine. After you work in small groups, we'll save a few minutes to share one of your sentences with the whole class.</i>
Key Activity	<p>Distribute sheets and send children to work. Circulate to help children strategize through the routine, encourage equitable participation, observe interpersonal dynamics, and glean understanding about children's word use.</p> <p>While children work, select one group to present their response to the class. Have the group identify one or two members who will read the response aloud.</p> <hr/> <p>After about 7 minutes, signal for children to finish their answers and return to the whole group.</p> <p>Invite the reader(s) from the selected group to present their response by first reading the Weekly Question they chose and then their response. <i>Please read your response slowly so I can write it down.</i> Write the response on the chart paper.</p> <p><i>Let's see which Weekly Words they used! I'll read it again, and you can let me know when you hear a Weekly Word.</i></p> <p>Read the response aloud, slowly, and pause as children identify Weekly Words. Circle those words with the contrasting marker. Invite children from other groups to signal if they also used any of the same words. Highlight the meaning of the word as different groups used it, noting its similarities and/or differences in context and usage.</p>
Closing	<i>You have really packed words into your answers to the Weekly Questions!</i>
Standards	<p>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.</p> <p>L.6.2.a Use words and phrases acquired through conversations, reading, and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., When other kids are happy, that makes me happy).</p>
Ongoing	Listen to children's conversations as they work.

assessment	<p>How accurately do children use words in context? What contributions do they make to the construction of a response to a specific question?</p> <p>Observe children’s interactions in small groups. How effectively do children work in their groups? What roles do they take on?</p> <p>Reflect on the whole group sharing of one group’s response. What more was revealed about children’s understanding and application of words?</p> <p>Review each sheet. Use children’s answers to inform planning for successive lessons, reteaching words, and informal conversations with individual children.</p>
-------------------	---

Notes

Names: _____

Check the question you answer. Circle the words you use. Write your response.

___ How can wind change land, and why does it matter?

___ How do people interact with the land?

batter	transform	determine	remove
destroy	warn	expose	shape
grind	weather	interact	soak
particle	weathering	preserve	uninhabited



WEEK 6 Day 2

Text Talk
A Problem on Popham Beach (slides)

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. Changes happen over time.
Guiding Questions	How do people interact with land?
Weekly Question	How do people interact with the land?
Content Objectives	I can explain the problem of erosion on Popham Beach. (SL.2.2.a) I can explain how maps and other images are an important part of understanding a text. (R.11.2c, R.11.2.d, 2.T1.1).
Language Objective	I can use content-specific vocabulary to describe what happens on Popham Beach over time. (L.6.2.a)
SEL Objectives	I can explain why Popham Beach is important. (Social Awareness)
Vocabulary	recommendation: suggestion preserve: to keep safe from harm or loss
Materials and Preparation	<ul style="list-style-type: none"> ● A Problem on Popham Beach slides ● projector and screen ● Slowing and Preventing Erosion charts completed thus far Note: Only the Nile River/Barrier example is needed, but having all of the charts available gives the children the opportunity to select this one purposefully. ● Examples of Approaches to Slowing and Preventing Erosion cards, cut apart ● Gluestick ● marker

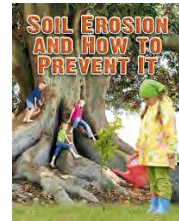
<p>Opening 2 minutes</p>	<p><i>Today we will learn more about what is happening on Popham Beach.</i></p>
<p>Text and Discussion (10 minutes) slide 2</p>	<p><i>You have seen this photograph before. Thumbs up if you remember it. This photo was taken during the Winter months of Popham Beach in 2024. As we know, Popham Beach is an example of a place where wind and water are eroding the land.</i></p>
<p>slide 3</p>	<p><i>Here is the island from above.</i> Invite children to share their observations and connections.</p>
<p>slide 4</p>	<p><i>Let's look at this photo again. What evidence do you see that erosion is happening here?</i> Children might remark that the shape of the land looks carved away by wind/storms, that the trees have fallen, that the dry land is exposed, dunes are missing, and that roots are exposed.</p>
<p>slide 5</p>	<p><i>Does this photo give you any more information?</i> Children will be better able to see exposed, dangling roots, the curve/concave of the land, and layers of different kinds of soil.</p> <p><i>We know that erosion is happening on Popham Beach and other Maine beaches. Sand movement, weather erosion, and water have had a very serious effect on Popham Beach, causing extreme shoreline change and dune erosion.</i></p>
<p>Key Discussion 15 minutes slide 6</p>	<p><i>What do you notice in this image?</i> Invite children's observations and wonderings.</p> <p><i>Three different organizations: the Maine Department of Agriculture, Conservation and Forestry and Maine Geological Survey, tried this strategy in the Winter of 2024. They experimented with using old Christmas trees to slow down erosion.</i></p> <p><i>How might this strategy slow down erosion? Turn and talk to a partner.</i> Harvest responses. <i>The branches and pine needles trap sand.</i></p> <p>With the children, select the chart that began with the Nile River barriers. Add Barrier: Trees on Popham Beach as an example on the chart. Glue on images with the captions "Trees on Popham Beach."</p>
<p>slide 7</p>	<p><i>What do you enjoy about the beach? How is Popham Beach an amazing place for children and families?</i> Invite children to turn and talk.</p>

slide 8	<i>Popham Beach recently spent funds on a new public building, a bathroom and changing room. However, erosion is threatening to wash it away from the area.</i>
	<p><i>Erosion carved away so much land that now the bath-house is in trouble! In this photo, the water was only 25 feet away from the new bathhouse. Popham was worried that the bathhouse was going to collapse into the water.</i></p> <p><i>What do you think about this?</i> Invite 2-3 responses.</p> <p>Think, Pair, Share. <i>What are your ideas to help slow down the erosion in this area?</i> Elicit a few responses. Highlight connections to previous conversations.</p>
Closing (2 minutes)	<p><i>Popham Beach is a place where people have intervened with nature—they do something to change what is already happening in the environment. We have already started setting up experiments that can give us some information about erosion on an island like Popham. This week, we’ll experiment, and then we’ll make a recommendation, or suggestion, about what people could do next to try to slow the erosion there and preserve, or save, this important place.</i></p> <p><i>We’ll be working on our recommendation for the next few weeks, and then we will share it with other second graders to see what ideas they have.</i></p>
Standards	<p>R.11.2.c Explain how specific visuals contribute to and clarify the meaning of a text.</p> <p>R.11.2.d Compare and contrast the information presented by two texts on the same topic.</p> <p>SL.2.2.a Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>L.6.2.a Use words and phrases acquired through conversations, reading, and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., When other kids are happy, that makes me happy).</p> <p>Social Studies 2. Use correctly words and phrases related to time (now, in the past, in the future), changing historical periods (other times, other places), and causation (because, reasons). (H)</p>
Ongoing	Evaluate children’s investment in responding to erosion on Popham Beach,

assessment	based on their conversations. Notice how fluidly children use content-specific vocabulary to discuss erosion and approaches to erosion, maps and other representations of place. How do children discuss erosion and possible approaches to it? How easily do children make a connection between the barriers at the Nile River delta and the barriers constructed on Popham Beach?
-------------------	--

Unit 2: The Forces of Wind and Water

WEEK 6 Day 3



Text Talk
Erosion: Changing Earth's Surface (pages 18-19)
 and
Soil Erosion and How to Prevent It (page 16)

Big Idea	Wind and water can change the shape of the land.
Weekly Question	How do people interact with the land?
Content Objective	I can gather key details to describe how humans cause fast erosion. (R.4.2, R.6.2.b, 2.T2.4)
Language Objective	I can discuss erosion caused by humans and compare this to natural erosion. (SL.1.2)
SEL Objective	I can evaluate the consequences of human actions on erosion. (Decision Making)
Vocabulary	<p>cause: to make happen (*Week 1)</p> <p>century: one hundred years</p> <p>clogged: blocked</p> <p>dam: a barrier constructed to hold back water</p> <p>erode: to gradually wear away</p> <p>irrigation: the supply of water to land or crops</p> <p>deposition: when particles of soil and rocks settle in a new location (*Week 4, refer to deposit: to place or put down)</p> <p>positive: good or useful</p> <p>* remove: take away</p> <p>sediment: mud with minerals and rocks in it (*Week 4)</p> <p>* shape: to give form to something</p>

	<p>* soak: to make completely wet</p>						
<p>Materials and Preparation</p>	<ul style="list-style-type: none"> ● <i>Erosion: Changing Earth’s Surface</i>, Robin Koontz ● <i>Soil Erosion and How to Prevent It</i>, Natalie Hyde ● Comparing Erosion slides ● projector and screen ● Comparing Erosion text excerpts, one copy per child ● chart paper <p>Create the chart, Comparing Erosion.</p> <table border="1" data-bbox="505 583 1346 1066" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">Comparing Erosion</th> </tr> <tr> <th style="width: 50%;">Effects of Natural Erosion</th> <th style="width: 50%;">Effects of Erosion Caused by Humans</th> </tr> </thead> <tbody> <tr> <td style="height: 150px;"></td> <td style="height: 150px;"></td> </tr> </tbody> </table> <p>On the whiteboard, write:</p> <p style="padding-left: 40px;">Why is the heading, “All Choked up?” important? What does it tell readers?</p> <p style="padding-left: 40px;">How does the river get “choked up,” and what do people have to do with it?</p> <p style="padding-left: 40px;">Why is it a problem for the river to get clogged with sediment?</p>	Comparing Erosion		Effects of Natural Erosion	Effects of Erosion Caused by Humans		
Comparing Erosion							
Effects of Natural Erosion	Effects of Erosion Caused by Humans						
<p>Opening 1 minute</p>	<p><i>For the past few weeks we’ve been learning about natural erosion and how wind and water change the land. This is the kind of erosion that usually takes many years to happen. Most of this natural erosion has a positive effect on our land.</i></p> <p>Set a purpose for reading.</p> <p><i>But sometimes, erosion happens much more quickly and the effect is not so positive. We will read chapters from two texts about erosion: <i>Erosion: Changing Earth’s Surface</i> by Robin Koontz and <i>Soil Erosion and How to Prevent It</i> by Natalie Hyde [show the books]. While we read, we’ll fill in this chart to compare erosion that</i></p>						

	<i>happens naturally to erosion that is caused by humans.</i>
<p>Text and Discussion 21 minutes</p> <p><i>Erosion: Changing Earth's Surface</i> page 18, paragraph 1</p>	<p>Distribute Comparing Erosion text excerpts, and project the slides.</p> <p>Read the heading and paragraph. <i>Sometimes nature speeds up erosion, and then dangerous things can happen, such as hurricanes and landslides.</i></p> <p>Direct children's attention to the Comparing Erosion chart. <i>What are some of the effects of natural erosion?</i></p> <p>Record children's ideas on the left hand side of the chart ("...Natural Erosion").</p> <p>Encourage children both to cite evidence from the text and to think about some of the other effects previously encountered in other texts and images. Be sure the list includes fertile floodplains and the natural beauty of rock formations.</p>
<p>page 18, paragraph 2</p>	<p><i>The author, Robin Koontz, mentions several things people do that speed up erosion, which can be dangerous. What are the examples that Robin Koontz provides?</i></p> <p>Elicit a list of human actions. If children do not name them, be sure to mention that people cut down trees, cut away mountains, stop rivers with dams, and let cattle eat all of the grass.</p> <p><i>Turn and talk to a partner. Pick one human action that speeds up erosion. What is it? How does this action speed up erosion? Why is this important?</i></p> <p>After children turn and talk, record ideas on the right hand side of the chart (... Caused by Humans").</p>
<p>page 19</p>	<p><i>This paragraph talks about a time when farmers over-plowed the land, removing important plants and grasses. This caused some dangerous, fast erosion in the 1930s. We will talk a little bit more about this tomorrow during Text Talk.</i></p> <p><i>What is an effect of erosion that is caused by humans that we can add to the list? Children may include "soil being blown away."</i></p>
<p><i>Soil Erosion and How to Prevent It</i> page 16, paragraph 1</p>	<p>Define deposition, connecting it to children's knowledge of the word "deposit."</p> <p><i>Where can we add deposition to our chart—effects of natural erosion, or caused by humans? Why?</i></p> <p>Invite a couple of children to share their rationale.</p>

	<p><i>What are some ways humans can make erosion worse?</i> Support children in citing evidence from the text.</p> <p><i>Let's keep reading to see more effects of erosion caused by humans.</i></p>
<p>page 16 paragraph 2</p>	<p>Read the paragraph titled "All Choked Up." <i>This is another example of erosion caused by humans. Now that we've read the paragraph once, let's listen closely so that we can explain what happens in the Mississippi River Delta.</i></p> <p>Read "All Choked Up" again. Facilitate a whole group discussion guided by the questions on the board.</p> <p><i>Why is the heading, "All Choked up?" important? What does it tell readers?</i> <i>How does the river get "choked up" and what do humans have to do with it?</i> <i>Why is it a problem for the river to get clogged with sediment?</i></p> <p><i>What can we add to the chart listing effects of erosion caused by humans? [rivers clogging]</i></p>
<p>Key Activity 17 minutes</p>	<p>Refer to the chart. <i>Now that we've explored these specific examples of erosion, let's think about how erosion caused by humans is different from natural erosion.</i></p> <p>Distribute writing sheets. Read the prompt aloud, and then invite children to read it chorally. Remind children to cite details from the text in their responses, and send them to write.</p> <p>As children write, circulate to identify how children are responding to the prompt and provide support as needed.</p> <p>After about 14 minutes, gather children back in the whole group. Solicit their ideas and add to the chart.</p> <p><i>Something we might add to the "Natural Erosion" side of our chart is that erosion is slower when trees and plants protect the land.</i></p> <p><i>On the "Caused by Humans" side we can add that when humans remove trees and plants from the environment, the land is more likely to change.</i></p>
<p>Closing</p>	<p><i>Today we considered how we, humans, affect erosion. Tomorrow</i></p>

Comparing Erosion text excerpts

Erosion: Changing Earth's Surface excerpt, pages 18-19



Text Talk U2 W6 D3



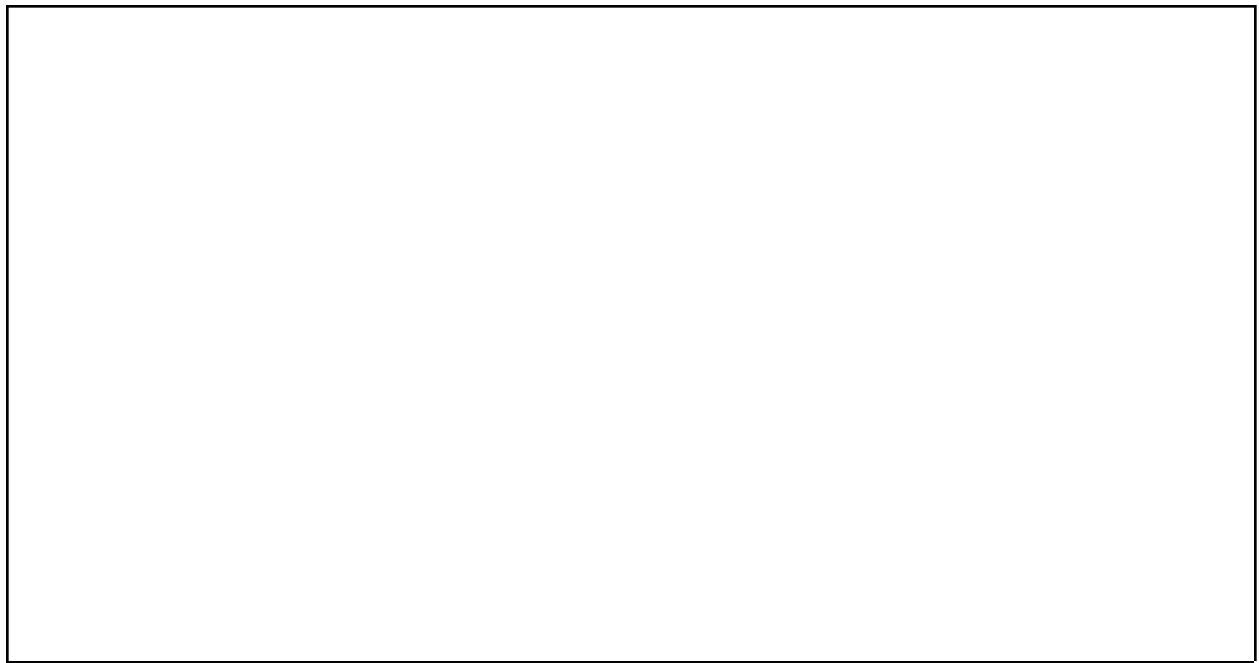
There is a balance in nature between land that is eroded and land that is made by deposition. Humans often upset the balance. Farming, logging, and construction can all make erosion worse.

ALL CHOKED UP

The Mississippi River carries a lot of sediment into the Gulf of Mexico. Irrigation adds water to soil that may already be soaked with rainwater. This causes soil to be washed away much quicker than just by heavy rains. The Mississippi River Delta becomes **clogged** or choked with sediment. Today, the Delta is growing into the Gulf by about six miles (10 km) every century.

► *In June 2008, part of the Mississippi flooded its banks causing serious damage to local farming communities.*







Text Talk
What Can Grass Do? (slides)

Big Idea	Wind and water can change the shape of the land.
Weekly Question	How do people interact with the land?
Content Objectives	I can use images to describe the effects of wind on land and explain how planting grass can slow or prevent erosion. (R.11.2.c, R.11.2.d, 2-ESS2-1) I can identify ways that humans can slow down and prevent erosion. (2.T2.4)
Language Objective	I can use content-specific vocabulary to describe and explain the effects of wind on land. (L.2.6)
SEL Objective	I can actively listen to my peers and agree with, disagree with, or build onto their thinking. (Relationship Skills)
Vocabulary	<p>discover: to find something for the first time</p> <p>grass: plants that have narrow green leaves, that are eaten by cows, sheep, horses, and other grazing animals., and that are commonly grown on lawns</p> <p>prairie: a large, mostly flat area of land in North America that has few trees and is covered in grasses</p> <p>root: the part of a plant that grows underground, gets water from the ground, and holds the plant in place</p> <p>sand: tiny pieces of rock</p>
Materials and Preparation	<ul style="list-style-type: none"> ● What Can Grass Do? slides ● projector and screen ● world map and pushpins ● United States map ● Slowing and Preventing Erosion charts completed thus far

	<p>Note: Only the Planting example is needed, but having all of the charts available gives the children the opportunity to select this one purposefully.</p> <ul style="list-style-type: none"> ● marker ● Examples of Approaches to Slowing and Preventing Erosion from Day 2: four examples of planting ● glue stick ● Text Talk Notebooks ● pencils and colored pencils
<p>Opening 1 minute slide 1</p>	<p><i>One thing people do to protect land from wind and water erosion is to plant grass. Does that idea sound familiar to you? Let's think about how this works.</i></p>
<p>Text and Discussion 20 minutes slide 2</p>	<p>As slides are shown and children discuss in pairs. Harvest ideas in the whole group to surface important vocabulary and consolidate knowledge.</p> <p><i>Why do you think this sign is here?</i></p> <p>Harvest a few ideas, and then continue without offering an explanation; this understanding will emerge as the lesson unfolds.</p>
<p>slide 3</p>	<p>Turn and talk.</p> <p><i>Can you imagine what happens to this beach when a strong wind comes along? What about very strong waves?</i></p> <p><i>This beach is in Kennebunk. Raise your hand if you've been there.</i></p>
<p>slide 4</p>	<p>Show Cape Cod on the United States map. Point out its proximity to Maine.</p> <p>Distribute Text Talk notebooks and pencils.</p> <p><i>What's going on here? What do you notice about the grass on the beach? What else do you notice? Write a few notes about what you see in your notebooks.</i></p> <p>Give children a couple of minutes to write, and then invite a few children to share what they wrote. Encourage children to use hand signals to show agreement.</p>
<p>slide 5</p>	<p><i>Turn and talk. What's going on here?</i></p>
<p>slide 6</p>	<p>Take a Note Break.</p> <p><i>These people are planting grass on the beach. What do you think they are hoping will happen?</i></p> <p>Give children a couple of minutes to write, and then invite a few children to share what they wrote. Encourage children to use hand signals to show</p>

	agreement.
slide 7	<p><i>Many kinds of beach grass have roots that spread out underground. What do roots do for plants?</i></p> <p>Harvest a few ideas, and then explain.</p> <p><i>These spreading roots help to keep the plants in place, and the plants help to keep the sand in place.</i></p>
slide 8	<p><i>Turn and talk. What do you notice about this grass?</i></p> <p><i>This is a very different kind of grass, growing in the western part of the United States.</i></p>
slide 9	<p>Point out South Dakota.</p> <p><i>The state of South Dakota has a lot of open, flat land; it can be very windy here. Prairie grasses grow naturally in this part of the country.</i></p>
slide 10	<p><i>Look at what long roots these plants have! They reach way down into the soil.</i></p> <p><i>Turn and talk. Why might it be useful for the grasses in a windy place to have long roots?</i></p>
slide 11	<p><i>Sometimes cattle eat too much grass in one place. The animals eat and eat and eat, until the grass isn't able to grow anymore. With no plants growing with long roots to keep the ground in place, with dry summers and strong winds, we sometimes get dust storms in prairies. Yesterday, we read briefly about the Dust Bowl. Over 80 years ago in the United States, lots of land was destroyed because there was no grass to keep it in place. People had to move, because they couldn't grow food.</i></p>
slide 12	<p><i>This taught farmers and other people some important lessons about how to take care of our land. This photograph was taken by Dorothea Lange, an important American photographer. She was part of a team of photographers and writers who set out to document people's lives across the United States.</i></p>
slide 13	<p>Chorally read the text.</p> <p><i>How does planting grass help to slow down and prevent erosion?</i></p> <p>Harvest several ideas, encouraging children to reference each other's comments using established discussion prompts.</p>
slide 14	<p><i>People plant grasses to prevent erosion all over the world. This farmer is in Vietnam, a country on the continent of Asia. He is</i></p>

	<p><i>growing cassava, a vegetable that many people depend on. His farmland is very hilly, so the soil can run right down. He plants the grass in between the cassava plants to keep the soil and the plants in place.</i></p> <p>Point out Asia and then Vietnam on the world map. Add a pushpin. <i>Let's read the caption.</i> <i>This grass is doing two important jobs: keeping the land in place for the farmer's cassava plants, and feeding his cattle.</i></p>
<p>slide 15</p>	<p><i>In other places, too, farmers plant grass between plants grown for food. This farmer is far away from both the United States and Vietnam: in Kenya, a country on the continent of Africa.</i></p> <p>Point out Africa and then Kenya on the world map. Add a pushpin. <i>People all over the world have discovered that planting grass with long, strong roots helps the land stay in place.</i></p> <p><i>Let's think about the approach to erosion we have been talking about today: planting grass.</i> <i>We have two charts so far: one about putting up barriers, and one about planting. Where does this example go?</i></p> <p>Once children identify the planting chart as appropriate, add all four places explored in the slides: Cape Cod - beach, South Dakota - prairie, Vietnam - farm, and Kenya - farm.</p>
<p>Key Activity 18 minutes</p>	<p>Distribute the writing sheets and colored pencils. Read the directions. Allow time for children to draw and write their captions.</p> <p>Have children leave their sheets around the meeting area or tables (wherever they have been writing), and invite them to walk around to look at the drawings and captions. <i>As you look at your classmates' drawings and captions, think about what is similar and what is different from your own work. What did others include that you did not? What details seem very important?</i></p> <p>Gather the group back together. <i>What did you notice about your classmates' drawings and captions?</i> Harvest several ideas, highlighting children's efforts at capturing specific elements in drawing and writing and making connections to the Weekly Question, How do people interact with the land?</p> <p><i>We are learning that there are different ways that humans can help</i></p>

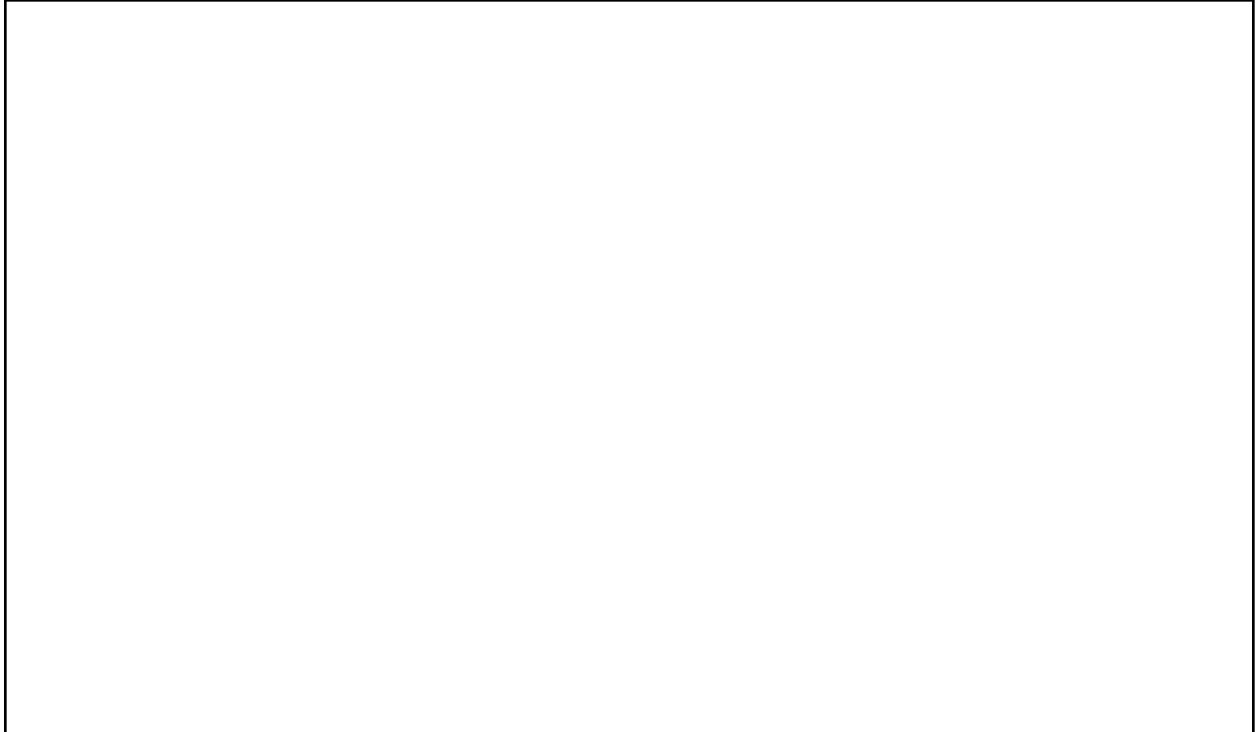
	<i>to slow down and prevent erosion.</i>
Closing 1 minute	<i>Today we identified new ways to slow or prevent erosion and added to our chart. We'll compare our slowing and preventing erosion charts next week.</i>
Standards (Boston)	<p>R.11.2.c Explain how specific visuals contribute to and clarify the meaning of a text.</p> <p>R.11.2.d Compare and contrast the information presented by two texts on the same topic.</p> <p>L.6.2.a Use words and phrases acquired through conversations, reading, and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., When other kids are happy, that makes me happy).</p> <p>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.</p> <p>2.T2.4 Explain and describe human interaction with the physical world (the environment).</p> <p>SEL.Relationship Skills</p>
Ongoing assessment	<p>Reflect on children’s contributions to the class discussion. Review their writing</p> <p>Do children discern how different situations require different approaches to slowing and preventing erosion?</p> <p>Do children articulate differences between the effects of wind and water on land?</p> <p>What do children understand now about what makes a landscape vulnerable to erosion (by wind or water)?</p> <p>Make notes about misconceptions and questions children have, as well as about understandings that seem to be solidly developing.</p>

Notes

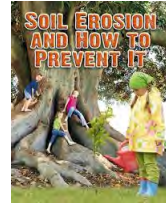
Writing Response: **What Can Grass Do?**

Name: _____ Date: _____

Directions: Draw a picture that shows one way that humans can slow or prevent erosion. Write a caption.



Caption: _____



WEEK 6 Day 5

Text Talk
Soil Erosion and How to Prevent It (pages 24-25)

Big Idea	Wind and water can change the shape of the land.
Weekly Question	How do people interact with the land?
Content Objective	I can describe the author’s message in an informational text. (R.5.2.a, R.9.2.b)
Language Objective	I can discuss my ideas in partner and large group conversations. (SL.1.2)
SEL Objective	In discussions with classmates, I can express my ideas thoughtfully and consider the ideas of others. (Relationship Skills)
Vocabulary	<p>* determine: to come to a conclusion</p> <p>erosion: wearing away and reshaping of land</p> <p>floodwall: a barrier built to prevent flooding</p> <p>nutrient: something that helps people, animals, and plants live and grow (*Week 2)</p> <p>levee: a long wall of soil, built to prevent flooding</p>
Materials and Preparation	<ul style="list-style-type: none"> ● <i>Soil Erosion And How to Prevent It</i>, Natalie Hyde Flag pages 24-25. ● Slowing and Preventing Erosion chart with Approach: Planting ● chart paper <p>Prepare a new Slowing and Preventing Erosion chart, if not done previously, with at least half of the space left empty for work in Week 7.</p> <ul style="list-style-type: none"> ● Examples of Approaches to Slowing and Preventing Erosion cards, from Day 2: three examples of walls ● glue stick

	<p>On the whiteboard, write:</p> <p style="padding-left: 40px;">What key points does Natalie Hyde make in this paragraph?</p> <p style="padding-left: 40px;">What are some ways that humans can prevent soil erosion?</p> <p>Children will work with partners. Plan partners strategically, based on children’s individual needs.</p>
<p>Opening 4 minutes</p>	<p>Set a purpose for reading.</p> <p style="padding-left: 40px;"><i>We’ve been reading lots of informational text to help us learn about erosion and how water and wind change the land. Today we will read one more chapter in Soil Erosion And How to Prevent It and determine what Natalie Hyde wants to communicate. This chapter is titled “Stop It.” What do you think the author wants to stop?</i></p> <p>Highlight aspects of children’s thinking that draw on previous Science and Engineering and Text Talk lessons and experiences in Studios.</p> <p>Read the first paragraph, in bold, on page 24.</p> <p>Consider the author’s purpose.</p> <p style="padding-left: 40px;"><i>In informational texts, authors sometimes express their opinions about a topic. Turn and talk to a classmate. Based on the title of the chapter, “Stop It,” and the introductory paragraph, what do you think is the author’s opinion about humans and soil erosion?</i></p> <p style="padding-left: 40px;"><i>As we continue reading this chapter, we’ll identify the key points Natalie Hyde makes to communicate her message.</i></p>
<p>Text and Discussion 7 minutes</p> <p>page 24</p>	<p>Preview vocabulary.</p> <p style="padding-left: 40px;"><i>There is a new word in the next paragraph, in bold type. A levee is a barrier, such as a wall, constructed to stop the flow of water.</i></p> <p>Read the paragraph titled “Balancing Act.”</p> <p style="padding-left: 40px;"><i>One of Natalie Hyde’s main points in this paragraph is that people need to allow some flooding to happen because flooding is a natural way to nourish the land. We know this because the text says, “People need to...” The author is emphasizing that humans must help nature keep its balance.</i></p> <p style="padding-left: 40px;"><i>Turn and talk to a partner. What is another point that Natalie Hyde makes in this paragraph?</i></p> <p>Harvest a few ideas, highlighting that humans need to try to protect floodplains.</p>

<p>page 25</p>	<p>Read the subheading and paragraph, “Holding Back Water.” <i>This is confusing. The subheading reads, “Holding back water,” but the paragraph and the photograph seem to be describing a way to hold the land in place. This is one way to slow down erosion. Let’s make a new chart for this idea.</i></p>
<p>Introduce Slowing and Preventing Erosion Chart 10 minutes</p>	<p>Introduce a new Slowing and Preventing Erosion chart. <i>This text introduces another approach to erosion: holding the soil in place using rocks. In this photograph, the rocks form a kind of wall. The water can still crash against the land, but the rocks keep the land from being washed away.</i></p> <p>Record this idea next to “Approach:” building a wall.</p> <p><i>Why is there a wall here? We’ll write “to keep the land in place” on the next line, “Reason.”</i></p> <p>Record.</p> <p><i>This next line is where we will write the specific example of building a wall of rocks. The caption tells us that this sea wall is in Chesapeake Bay. That’s in Maryland, in the United States, very close to Washington, DC.</i></p> <p>Indicate the location on the map.</p> <p><i>Turn and talk: What other kinds of materials might work to make a wall to hold land in place? Think about what you know about materials and their properties.</i></p> <p><i>Here are a couple more images that show us other materials that can be used to create a wall to hold the land in place.</i></p> <p>Add these to the chart: “Wall: dunes on Cape Cod, Massachusetts” and “Wall: levee in New Orleans, Louisiana.”</p>
<p>Text and Discussion 8 minutes</p> <p>page 25</p>	<p><i>Let’s return to reading.</i></p> <p>Read “Limited Use.” <i>As I read this a second time, think about the heading and details.</i></p> <p>Reread the paragraph. Refer to the questions on the board. <i>Now, turn to a partner and talk for a moment: What key points does Natalie Hyde make in this paragraph? What are some ways that humans can prevent soil erosion? Make sure both partners have a chance to talk.</i></p> <p>Bring children’s attention back to the whole group. Invite several children to share their partner conversations, encouraging them to cite specific</p>

	<p>evidence from the paragraph.</p> <p><i>What's the main point that Natalie Hyde wants to communicate in this paragraph? How do you know?</i></p>
<p>Key Discussion and Activity 10 minutes</p>	<p>Think, Pair, Share. <i>Think about all the information we read on these two pages. What does Natalie Hyde want us to learn here?</i></p> <p>Refer to the Slowing and Preventing Erosion chart (Planting). <i>This text suggests an approach to erosion that we have discussed already: planting to keep soil in place. Let's add this example to our chart.</i> <i>Notice that the text doesn't tell us specifically where this is happening; in explanations, as we are learning in Writing, the nouns are general. We'll just record the title of the book and page number so we remember where we saw it when we look back later.</i></p> <p>Elicit information from the children to record. At the close of this lesson, the chart may look something like this:</p> <div data-bbox="524 993 1321 1505" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;">Slowing and Preventing Erosion</p> <p>Approach: <i>planting</i></p> <p>Reason: <i>to keep the soil in place</i></p> <p>Example(s): <i>planting</i></p> <ul style="list-style-type: none"> - <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> </div>
<p>Closing 1 minutes</p>	<p>Revisit the Weekly Question. <i>What have you come to understand about how people interact with land?</i> <i>What connections can you identify to our classroom experiences?</i> <i>What questions do you have?</i></p>
<p>Standards</p>	<p>R.5.2.a Retell texts, including details about who, what, when, where, how, and why; demonstrate understanding of the theme.</p>

	<p>R.9.2.b Identify the main purpose of a text, including what the author wants to answer, explain, or describe.</p> <p>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.</p> <p>SEL.Relationship Skills</p>
<p>Ongoing assessment</p>	<p>As children contribute to the whole group, consider:</p> <ul style="list-style-type: none"> Do children determine the main points and key details of a text? Do children describe what the author is most trying to communicate? What strategies are children using? Do children cite evidence from the text? <p>During partner work, listen in.</p> <ul style="list-style-type: none"> Do children’s oral contributions include evidence from the text? Do children draw from previous experience?

Notes

Unit 2: The Forces of Wind and Water

WEEK 6

Stations

Station	Activities	Materials
		Writing tools at each station
Guided Independent Reading		<ul style="list-style-type: none"> individual book bags
Teacher groups: strategic small group instruction		
Listening & Speaking	Listen and Respond	<ul style="list-style-type: none"> audio recording and technology <i>How Do Wind and Water Change Earth?</i> book conversation prompts
Science Literacy	How did water and wind change my quadrat?	<ul style="list-style-type: none"> Unit 2 Science and Engineering packets colored pencils
Vocabulary	Choose 3!	<ul style="list-style-type: none"> Week 5 Weekly Words cards Recording sheets Choose 3! menu
	Talk About It: Imagine and tell a story about what has happened or what could happen in this image.	<ul style="list-style-type: none"> Week 5 and Week 6 Weekly Words cards Week 6 image, 2 copies cut apart Week 6 sheets
Word Work (align skills with literacy program) Provide activity directions cards	Writing words, using them in sentences	<ul style="list-style-type: none"> Week 6 Look Cover Write Check sheets
	Making and marking new words with suffixes	<ul style="list-style-type: none"> Week 6 Add On to Base Words sheets
Writing	Continued work from Text Talk Day 3: responding to sections of <i>Erosion: Changing Earth's Surface</i>	<ul style="list-style-type: none"> Comparing Erosion text excerpts Writing Response sheet

How Do Wind and Water Change Earth? conversation prompts: Cut apart and provide with the physical text and audio recording.

Page 5:

We can't see the path of a river changing. Why do you think this is?

How Do Wind and Water Change Earth?

Page 7:

How does wind cause erosion?

How Do Wind and Water Change Earth?

After reading:

How does wind affect people who live in cities?

How Do Wind and Water Change Earth?

I agree with you. I also think ____.

Why do you think that?

I don't think I agree with you because ____.

Talk About It



<https://www.nationalgeographic.org/encyclopedia/erosion/>



<https://www.nationalgeographic.org/encyclopedia/erosion/>

Talk About It

Name: _____ Date: _____

Imagine and tell a story about what has happened or what could happen in this image.

Look carefully at the image. **Talk** with your partner, **draw and write** about your ideas, and then **share** your writing. Use important vocabulary words as you talk and write. **Circle** the important words you use.



Name: _____

Look	Cover	Write	Check ✓
------	-------	-------	---------

eight	<hr/> <hr/> <hr/>	
large	<hr/> <hr/> <hr/>	
change	<hr/> <hr/> <hr/>	
city	<hr/> <hr/> <hr/>	
every	<hr/> <hr/> <hr/>	
family	<hr/> <hr/> <hr/>	

Skills: recognize and read grade-appropriate irregularly spelled words.

Use it in a Sentence

eight

large

change

city

every

family

Name: _____

Add On to Base Words

Read the words. Add suffixes to make new words.
Underline the base word. Circle the suffix.
Choose from these suffixes: **-ty, -ly, -y.**

example: wild	<u>wild</u> ly
grump	
fluff	
careful	
luck	
nine	
crunch	
brave	
stick	
safe	

Skills: decode words with common prefixes and suffixes.

Unit 2: The Forces of Wind and Water

WEEK 6 Lesson 1

Science and Engineering: Quadrat Study 4

Changes by Wind and Water

This lesson connects to and continues the year-long Quadrat Study.
The investigation will be most successfully conducted on ground that is relatively dry.

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 does our Earth look like? What makes it look that way?
Content Objective	I can plan an investigation to understand how wind and water might change the shape and features of my quadrat. (Practice 3, 2-ESS2-4)
Language Objective	I can talk with my partner to plan an investigation. (SL.1.2.b, SL.1.2.c)
Vocabulary	distribution: the way something is shared in a group or spread over an area isolate: to set apart quadrat: a small area of habitat, usually selected to collect data about the distribution of plants or animals
Materials and Preparation	Review outside expectations with the children. Review children's entries in Science and Engineering packets from the first quadrat study. Select a few that show different and informative observations. <ul style="list-style-type: none">● hula hoops or equivalent lengths of rope or twine knotted to enclose a circle, one for each child● Science and Engineering packets● writing and drawing tools, in one or more containers to carry outdoors● chart paper and markers● water, at least 1 liter

	<ul style="list-style-type: none"> ● straws, one for each child ● small paper cups, one for each child
<p>Opening 12 minutes</p>	<p><i>Today we're going back out to the schoolyard to continue our quadrat study. Remember, in a quadrat study scientists study the distribution of objects or organisms in an area—or how many of something there are.</i></p> <p><i>When we last observed the quadrats, you drew maps. You used the same color schemes that we have been using to show water and elevation. Let's take a look at a few examples of quadrat maps.</i></p> <p>Show the selected examples. Use a simplified Science Circle protocol to guide the conversation.</p> <p><i>What do you notice about elevation in these maps?</i></p> <p><i>Today you are going to investigate how wind and water can change the shape of the land in your quadrat. You'll investigate wind by blowing air through a straw, and you'll investigate water by slowly pouring a small cup of water in areas of your quadrat.</i></p> <p>Demonstrate how to model applying forces of water and wind to the land, pouring water on and blowing through a straw at a specific area.</p> <p>Show one example map. Point to an area of elevation.</p> <p><i>What do you think might happen to this area when the wind blows? What might happen when water is poured?</i></p> <p><i>This time, after each investigation, you'll record any changes in your area created by water and wind. What do you think you might record, and how would you record that?</i></p> <p>Distribute packets along with a straw and cup to each child. Take the children out to the schoolyard with quadrat markers (hula hoops/ropes).</p> <p>Direct children to return to their same spots.</p>
<p>Investigation 16 minutes</p>	<p>Once outside, offer reminders as needed for placing quadrat markers on the ground.</p> <p>As children work on applying wind pressure with their straws, circulate to support their investigation and representation. Circulate a second time to pour water into each child's cup for the second investigation and observation. Ask the following questions.</p> <ul style="list-style-type: none"> ● <i>What is the highest point of your area? What is the lowest?</i> ● <i>What happened to this area with the force of wind?</i>

	<ul style="list-style-type: none"> • <i>What happened to this area with the force of water?</i> • <i>What do you think happens to your quadrat when a storm comes through?</i> <p>Identify a few children to share their work with the whole group.</p>
Discussion 2 minutes	Bring the children back indoors. Set aside all materials except children’s packets. Ask identified children to share and describe their work. Encourage them to use precise vocabulary.
Closing	<i>How do wind and water affect your quadrat?</i>
Standards and Practices	<p>SL.1.2.b Build on others' talk in conversations by linking their comments to the remarks of others.</p> <p>SL.1.2.c Ask for clarification and further explanation as needed about the topics and texts under discussion.</p> <p>2-ESS2-4. Observe how blowing wind and flowing water can move Earth materials from one place to another and change the shape of a landform.</p> <p>Practice 3. Planning and carrying out investigations</p>
Ongoing assessment	<p>As children work to record their observations, take note of their approach to the task, particular interests, and how they might be best supported with ongoing outdoor learning.</p> <p>Review children’s packets.</p> <p>How do children represent the forces of wind and water enacted on their area?</p> <p>How do they represent changes?</p> <p>Have they included any labels or other notations?</p> <p>This is a year-long investigation. As children continue this work, look for greater details in their drawing and writing and increasingly meaningful connections to current unit content.</p>

Notes

Unit 2: The Forces of Wind and Water

WEEK 6 Lesson 2

Science and Engineering: Earth's Systems

Testing Approaches to Slowing and Preventing Erosion: Barriers and Planting

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 draw and write plans for an investigation. (W.1.2.a) I can work with a group to plan an investigation about slowing and preventing erosion. (Practice 3, 2-ESS2-1)
Language Objective	I can talk with classmates to plan an investigation. (SL.1.2.b, SL.1.2.c)
Vocabulary	approach: a way of doing something barrier: something that prevents movement
Materials and Preparation	Assign children to stable, small groups (about four children each) to work together during this pair of lessons. <ul style="list-style-type: none">● Erosion slides● Science and Engineering packets, one for demonstration● writing tools● collection of materials such as sticks, popsicle sticks, straws, rocks,● scraps of wood, container lid, pieces of fabric● aluminum trays, one for each group● scraps of paper or masking tape, one for each group, to label trays
Opening 10 minutes	<i>In Text Talk we have learned about and recorded different approaches people take to slow or prevent erosion. This week and next you will design and conduct investigations to test these approaches.</i>

Two approaches we have explored so far are building barriers to hold back water and planting to keep land in place.

Briefly review the approaches to slowing and preventing Erosion charts in the slides.

Today you will work with a small group to plan an investigation to test one of these approaches: either barriers or planting. We will conduct the investigations tomorrow.

Open a packet to show the page, Slowing Erosion Investigation Planning. *This is the page your group will use to plan your investigation. On the first line, "Approach," you will either write "barriers" or "planting."*

Below this is space to draw a diagram. The investigation you plan will be tested on an island. In the box, first draw an island, and then draw a diagram showing your approach. As a group, plan where on the island you will build a barrier or do some planting, and what your barrier or planted area will look like.

Show the bin of materials.

Your investigation will be a model of an approach to slowing or preventing erosion. Here are some materials you might plan to use. If you are building a barrier, which materials do you think might be useful? [rocks, wood scraps, container lids]

If you are planting, what might you use to represent the grass? [sticks, popsicle sticks, straws]

In addition to these materials, you might find something else in the classroom that would be useful for your model.

Refer again to the Slowing Erosion Investigation Planning page.

With your group, decide which materials you will use, and record them here, under "Materials needed."

Hold up an aluminum tray.

As your group identifies materials, gather them in this tray so you will be ready to do your investigation tomorrow.

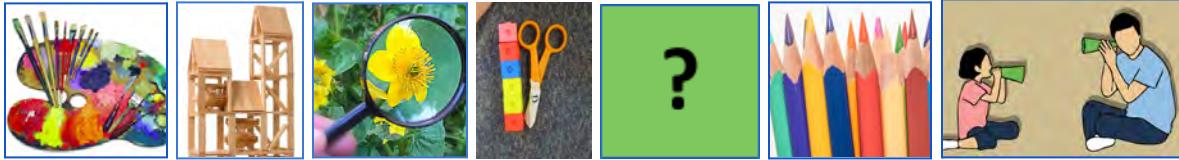
Refer again to the Slowing Erosion Investigation Planning page.

The last section is labeled "Prediction." Here you will record what you think might happen in this investigation. After building a barrier

	<i>or planting, what do you think will happen when wind and water hit the island?</i>
Investigation 20 minutes	<p>Divide the class into the small groups, with half of the groups planning barriers and the other half planning planting. Help the children identify a recorder for each group who will record the group’s ideas in their packet.</p> <p>As children plan, circulate to support their work. Help them identify and gather classroom materials to use in their investigations.</p>
Discussion	<i>Discussion about this experience will happen in Week 7.</i>
Closing	<p>Make sure that children label their group’s tray.</p> <p><i>Next time you will conduct your investigations and record the results!</i></p>
Standards and Practices	<p>W.1.2.a Investigate questions by participating in shared research and writing projects.</p> <p>SL.1.2.b Build on others' talk in conversations by linking their comments to the remarks of others.</p> <p>SL.1.2.c Ask for clarification and further explanation as needed about the topics and texts under discussion.</p> <p>2-ESS2-1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.</p>
Ongoing assessment	<p>Review each group’s plan.</p> <p>What materials did children choose? Are they appropriate? Are there other materials that might be helpful?</p> <p>What predictions have children articulated? Are they plausible?</p> <p>What understandings about approaches to slowing erosion do children’s plans reflect?</p>

Notes

WEEK 6 Studios



Beginning the Popham Beach Erosion Project


Children use the materials available in all studios to begin to explore their ideas about slowing erosion on Popham Beach. Specific work in studios will depend on projects taken on by individual children and small groups.


<p>Big Ideas</p>	<p>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. Changes happen over time.</p>
<p>Weekly Question</p>	<p>How do people interact with the land?</p>
<p>Materials and Preparation</p>	<ul style="list-style-type: none"> ● crayons for Matching Crayons routine ● Popham Beach Erosion Project Planning Prompts, copy for each pair of children ● new studios prompts Cut apart and replace studios prompts. Note: Sets of prompts are identical for each studio. ● Observation Sheets, on clipboards <p><u>New For the Math Studio:</u></p> <ul style="list-style-type: none"> ● number cards, 1-9 Each pair playing will need a set of number cards. ● Target Numbers Stage 4 recording sheet <p>Make sure that as many unit resources as possible are available at the <u>Research Studio</u> or obviously posted and accessible around the classroom: texts, photographs, maps, charts, videos.</p> <p>Reread the Popham Beach Erosion Project Overview in the Unit 2 introductory documents. Imagine a variety of activities to propose to the children, in consideration of the particular interests of the</p>


	<p>classroom community and of individual children. Prepare materials that will support suggested ideas, to begin. Some individual or small group project ideas include:</p> <ul style="list-style-type: none"> ● writing, creating a set and costumes for, and acting out a play about erosion (on Popham Beach), including what people might do about it and with roles such as ocean waves, storms, trees, and the land. ● building a model in the Landforms and Water Table that can be manipulated, accompanied by procedures for using it, for loan to classes with younger children. ● writing an informational pamphlet or other easily-reproduced resource to share with a broader audience, such as upper grade classes that travel to Popham Beach. Such a pamphlet could be shared with Outward Bound for distribution. ● creating a public bulletin board with visual and written information about erosion and how to approach it. ● writing and illustrating a small group or class book to add to the classroom library and to share with other classrooms. A book and bulletin board could be produced in tandem. ● building a model in the Landforms and Water Table, including both natural and human-made elements, to be displayed in the school lobby or library. ● creating a series of related artworks about the forces of wind and water, or inspired by different approaches to erosion.
<p>Opening</p>	<p><i>This week we’re beginning our Popham Beach Erosion Project: researching and testing different approaches to slowing or preventing erosion, and then recommending something that can be done at Popham Beach to slow erosion there. During Studios, you will think about an important idea that you would like to communicate about erosion on Popham Beach.</i></p> <p>Refer to the classroom schedule.</p> <p><i>You will have Studios time just twice this week. Next week, we’ll spend extra time with science and engineering investigations, instead of Studios. And then we’ll come back to Studios for the final week of our study, in order to prepare for our end of unit celebration.</i></p> <p><i>This is a bit unusual, so let’s take a few minutes to plan how we will use Studios time. There are lots of possibilities to think about.</i></p> <p>Supply some ideas about how children might pursue Studios work (above). Demonstrate, to the extent that is useful, materials and tools that will be made available in each studio.</p>

	<p>Distribute crayons for the Matching Crayons routine. <i>Find your crayon partner, and talk together about your ideas for using your time well during Studios to communicate your ideas about erosion on Popham Beach. Here are some questions to help you think about this.</i></p> <p>Distribute and read the Popham Beach Erosion Project Planning Prompts.</p> <p>Allow a few minutes for children to talk together. Encourage children to identify a partner or small group to work with. Have a few children share their plans aloud to the group. Support any children who are still unsure of how to proceed, perhaps suggesting classmates to work with, an area to work in, materials to start with, or specific ideas to pursue.</p> <p><i>In the Discovery Studio, you can continue the investigations you have been doing with water and wind. These investigations will help you work out what ideas you would like to communicate about erosion.</i></p> <p><i>In addition, in the Research Studio, you have started writing introductions for books in our classroom. These are really helpful to other members of our classroom community! This week you can continue this work. Remember to choose your books carefully and to choose the proper sheet, depending on whether the book is an informational or a fictional text.</i></p> <p><i>Of course, you will want to use the Research Studio for research, as well! As you develop your projects, make sure to use the resources we have: images, books, maps, video, and charts.</i></p> <p><i>Your work may use materials from more than one studio, but it will be based in one studio so that things don't get confusing. Think about where you think you'll spend the most time, and start there today.</i></p>
Process	Children pursue self-defined projects that communicate ideas about slowing or preventing erosion.
Facilitation	<p>Children might pursue any of the suggested projects; they might also propose and design other projects.</p> <p>Use the boxes below to record the kinds of work children are pursuing in order to plan for subsequent sessions in studios.</p> <p>To support organization within and among projects, encourage children</p>

	<p>to situate themselves in one studio, even as they may use materials and resources from—and collaborate with children in—other studios.</p> <p>Facilitate careful, intentional work by asking children questions about their plans, processes, discoveries, changes in course, collaborations, and successes. Insist that children articulate their work orally, artistically, or in written form in order to hold them accountable to the purpose of the work.</p>
--	---

<p>Art</p> 	<p>Communicating about Erosion</p> <p><u>Content Objective:</u></p> <p><u>Process:</u></p> <p><u>Facilitation/Prompts:</u></p> <p><u>Thinking and Feedback Possibilities:</u></p> <p><u>Ongoing Assessment and Next Steps:</u></p>
---	---

<p>Building</p> 	<p>Communicating about Erosion</p> <p><u>Content Objective:</u></p> <p><u>Process:</u></p> <p><u>Facilitation/Prompts:</u></p>
--	---

	<p><u>Thinking and Feedback Possibilities:</u></p> <p><u>Ongoing Assessment and Next Steps:</u></p>
<p>Discovery</p> 	<p>Simulating and Evaluating Approaches to Erosion</p> <p><u>Content Objective:</u> I can plan and set up experiments for testing and observing outcomes of different approaches to erosion.</p> <p><u>Process:</u> Children refer to the Approaches to Slowing and Preventing Erosion charts to decide how to structure new and continuing experiments. They may also refer to unit images for inspiration. Children use structures created in the Building Studio in Week 5 to simulate and evaluate approaches to erosion.</p> <p><u>Facilitation:</u> Provide useful resources. Make structures easily available and ask children to consider new possibilities for approaches to erosion.</p> <p><u>Thinking and Feedback Possibilities:</u> Children might revisit this work through photographs, or the class might gather around the Landforms and Water Table itself to consider peers' approaches to erosion. Discussion may include new ideas that can be part of the class recommendation to Popham Beach.</p> <p><u>Ongoing Assessment:</u> Consider how children use materials. Consider how they approach different erosion scenarios with familiar and novel materials.</p>

Math



Target Numbers

Objective:

I can add or subtract to get as close as possible to a target number.

Process/Directions:

- On your turn:
 - Start at 100
 - Draw a number card.
 - Choose whether to subtract that number as tens or ones.

For example:

I chose 7, so I could subtract 7 tens (70) or 7 ones (7). My equation could say $100 - 7 = 93$ On the next round the equation would start with 93.

- Each round, the difference from the previous equation is the starting number in the new equation.
- Take turns until you've played 6 rounds.
- The partner who gets a difference closest to 0 without going below 0 wins.

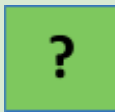
Facilitation:

Be sure to visit the Center and model how to play the game. Support children with their equations.

Ongoing Assessment:

Note children's strategies for playing the game. How are they approaching the goal and using equations to support their thinking? How are they working together to play the game?

Research




Communicating about Erosion / Book Introductions

Content Objective:

Process:

Facilitation/Prompts:

Thinking and Feedback Possibilities:

	<p><u>Ongoing Assessment and Next Steps:</u></p>
<p>Writing and Storytelling</p> 	<p>Communicating about Erosion</p> <p><u>Content Objective:</u></p> <p><u>Process:</u></p> <p><u>Facilitation:</u></p> <p><u>Thinking and Feedback Possibilities:</u></p> <p><u>Ongoing Assessment and Next Steps:</u></p>

<p>Standards</p>	<p>Standards addressed will depend on the studios in which children work. Some possibilities include developing work towards those listed in the Studios Introduction (Part 1).</p> <p><u>Math:</u></p> <p>2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p>2.NBT.B.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900</p>
-------------------------	---

Art Studio

While you are working, think about:

What is our idea?

What information will our audience need to understand our idea?

How can we use these materials to communicate this idea?

Do we need other materials?

What do we want our audience to do or think?

Building Studio

While you are working, think about:

What is our idea?

What information will our audience need to understand our idea?

How can we use these materials to communicate this idea?

Do we need other materials?

What do we want our audience to do or think?

Discovery Studio

While you are working, think about:

What is our idea?

What information will our audience need to understand our idea?

How can we use these materials to communicate this idea?

Do we need other materials?

What do we want our audience to do or think?

Math Studio

While you are working, think about:

How are you deciding whether your number is a ten? or a ones?

How are you using equations?

What do you like about playing games with a friend?

How can you teach this game to others?

Research Studio

While you are working, think about:

What is our idea?

What information will our audience need to understand our idea?

How can we use these materials to communicate this idea?

Do we need other materials?

What do we want our audience to do or think?

Writing and Storytelling Studio

While you are working, think about:

What is our idea?

What information will our audience need to understand our idea?

How can we use these materials to communicate this idea?

Do we need other materials?

What do we want our audience to do or think?

Popham Beach Project Planning

What important idea do we want to communicate about erosion?

Who is my audience?

What will I create or do to communicate this idea?

Who will I work with?

What materials will we need?

What resources will we need?

How will we know when our work is finished?

Target Numbers Stage 4 Recording Sheet

Directions:

- On your turn:
 - Start at 100. Draw a number card. Choose whether to subtract that number of tens or ones.
 - Write an equation to represent the difference.
- Take turns until you've played 6 rounds.
- Each round, the difference from the previous equation is the starting number in the new equation.
- The partner who gets a difference closest to 0 without going below 0 wins.

number card	choose	equation
	tens or ones	$\underline{100} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$
	tens or ones	$\underline{\quad\quad\quad} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$
	tens or ones	$\underline{\quad\quad\quad} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$
	tens or ones	$\underline{\quad\quad\quad} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$
	tens or ones	$\underline{\quad\quad\quad} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$
	tens or ones	$\underline{\quad\quad\quad} - \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$

Unit 2: The Forces of Wind and Water

WEEK 6 Day 1

Writing Explanation

Feedback and Revision: Explanation Steps

Content Objective	I can provide feedback on a jointly-constructed text and choose how to revise the writing. (W.w, W.2.2.a)
Language Objective	I contribute to a class discussion using feedback to make revisions. (SL.2.1)
Vocabulary	explanation: a genre of writing whose purpose is to explain a phenomenon in sequence explanation steps: the phenomenon explained, in order revision: change made to improve writing sequence: in a particular order stages: the parts of a piece of writing
Materials and Preparation	<ul style="list-style-type: none">● Explanation Steps Feedback sheet● jointly constructed phenomenon statement, from Week 5, Day 5● jointly constructed explanation steps, from Week 5, Day 5● Explanation Steps sheets, from Week 5, Day 5, 6 blank copies● tape and scissors
Opening 1 minute	<i>Today we will read our explanation and use the Explanation Steps Feedback sheet to analyze it and make revisions.</i>
Feedback 8 minutes	<p>Introduce the Explanation Steps Feedback sheet.</p> <p><i>We will reread our explanation to determine whether we have included all of the explanation steps, and whether they are in the correct order.</i></p> <p><i>As a class we collected ideas from different pairs, so each sheet includes different words and illustrations. As we review our work, we will make sure we have included all of the ideas. Then we will go back and decide together about the words we want to use.</i></p>

	<p><i>Let's begin by reading our phenomenon statement, to remember what we're explaining.</i></p> <p>Read the phenomenon statement.</p> <p>Read the top sheet of each packet of explanation steps, in order. Then, as a class, complete the Explanation Steps Feedback sheet.</p>
<p>Joint Construction and Revision 20 minutes</p>	<p>If the class determined that any steps were missing, write those now. Use the Think, Pair, Share routine to generate language for the steps. Then harvest children's ideas and write the jointly constructed language on the Explanation Steps sheets.</p> <p>If the class determined that the steps were in the wrong sequence, reorder the steps, according to the class plan.</p> <p>Once steps are complete and in the correct sequence, go back to choose the final language of the steps written on Week 5, Day 5. For each step:</p> <ul style="list-style-type: none"> ● review each sheet generated by pairs; ● decide on the most effective language for the step; ● if needed, write the new language on a blank Explanation Steps sheet; ● if there is an illustration that represents the step well, cut it out and tape it onto the sheet with the final explanation step language; ● write a number in pencil on the back of each sheet, to ensure that they stay in the correct sequence.
<p>Closing 1 minute</p>	<p><i>Today we began revising our explanation, looking at its stages. Tomorrow we will begin learning about the language of explanation and continue revising our work.</i></p>
<p>Standards</p>	<p>W.2 Develop, strengthen, and produce polished writing by using a collaborative process that includes the age-appropriate use of technology.</p> <p>W.2.2.a With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.</p> <p>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.</p>
<p>Ongoing assessment</p>	<p>Review the whole group discussion.</p> <p>What feedback do children provide?</p> <p>To what extent have the children internalized the stages of explanation?</p> <p>What suggestions do they make for revision?</p>

Explanation Steps Feedback

Writer's Name: _____

Reviewer's Name: _____

Explanation Steps

Does it include all **explanation steps**?

Yes

No

explanation steps to add:

Are the **explanation steps** in the right sequence?

Yes

No

explanation steps sequence plan:

Unit 2: The Forces of Wind and Water

WEEK 6 Day 2

Writing Explanation

Deconstruction and Revision: Verbs

Content Objective	I can contribute to revising the verbs in our class explanation. (W.2, W.2.2.a)
Language Objective	I can discuss the function of verbs in explanation. (SL.1.2)
Vocabulary	action verb: a verb that expresses action explanation: a genre of writing whose purpose is to explain a phenomenon in sequence present tense: happening now revise: to make changes to writing verb: a word that expresses a physical action, mental action, or state of being
Materials and Preparation	<ul style="list-style-type: none">jointly constructed explanation: phenomenon statement from Week 5, Day 5 and explanation steps from Week 6, Day 1Crashing Waves chart, from Week 5, Day 4
Opening 1 minute	<i>Today we will look at one important language feature of explanations: verbs.</i>
Deconstruction 13 minutes	Show the Crashing Waves chart. <i>Let's take a look at the verbs in explanations. First I am going to go through and underline the verbs. Remember, a verb is a word that expresses an action or a state of being.</i> Think aloud while reading and underlining the verbs in the chart. See the following example.

	<p style="text-align: center;">Crashing Waves</p> <p>Waves <u>crash</u> against the shore, <u>changing</u> its shape.</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 200px; height: 60px; margin-bottom: 10px;"></div> <div style="border: 1px solid black; width: 200px; height: 60px; margin-bottom: 10px;"></div> </div> <p>Strong ocean waves <u>crash</u> against the shore.</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 200px; height: 60px; margin-bottom: 10px;"></div> <div style="border: 1px solid black; width: 200px; height: 60px; margin-bottom: 10px;"></div> </div> <p>The waves <u>throw</u> the loose material back at the shore.</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 200px; height: 60px; margin-bottom: 10px;"></div> <div style="border: 1px solid black; width: 200px; height: 60px; margin-bottom: 10px;"></div> </div> <p>The waves <u>take</u> away pieces of the cliff and <u>bring</u> them to a new area.</p> <p style="text-align: center;">Ocean water slowly <u>erodes</u> soft rock and <u>breaks</u> chunks off the bottom of the cliff.</p> <p style="text-align: center;">Eventually, the cliffs <u>break</u> apart from the crashing.</p> <p style="text-align: center;">The eroded pieces from rocky cliffs <u>can become</u> a sandy beach not far away.</p> <p style="text-align: center;"><i>What do you notice about these verbs? Let me read them again.</i></p> <p>Read just the verbs. Harvest the children’s ideas. [The verbs are action verbs, except for “can become,” and are written in present tense.]</p> <p style="text-align: center;"><i>Verbs in explanations are different from those in procedures. Remember, procedure verbs are imperative and give directions. In explanations, verbs are actions in the present tense.</i></p>
<p>Revision 15 minutes</p>	<p style="text-align: center;"><i>Now let’s reread our explanation, focusing on the verbs. I am going to read each sentence slowly. When you hear the verb, raise your hand.</i></p> <p>Read each sentence and underline the verb. Use the following questions to discuss whether the verbs meet the requirements of explanation, and to</p>

	<p>guide revision. <i>Is this verb in the present tense?</i> <i>Is it an action verb?</i></p> <p>If the verb does not meet the requirements: <i>What would be a better verb here? Why is it better?</i></p> <p>Repeat this process with each sentence of the explanation, revising for verbs.</p>
<p>Closing 1 minute</p>	<p><i>Today we learned that explanations include present tense action verbs, and we revised our class explanation. Tomorrow we will learn about other important language features of explanation.</i></p>
<p>Standards</p>	<p>W.2 Develop, strengthen, and produce polished writing by using a collaborative process that includes the age-appropriate use of technology. W.2.2.a With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.</p> <p>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.</p>
<p>Ongoing assessment</p>	<p>Review the whole group discussion. What feedback do children provide? To what extent have the children internalized the role of verbs in explanation? What suggestions do they make for revision?</p>

Notes

Unit 2: The Forces of Wind and Water

WEEK 6 Day 3

Writing Explanation
Deconstruction and Revision: Nouns and Adjectives

Content Objective	I can contribute to revising the nouns and adjectives in our class explanation. (W.2, W.2.2.a)
Language Objectives	I can write using adjectives and general nouns. (L.1.2.e, L.1.2.a,L.1.2.b)
Vocabulary	<p>action verb: a verb that expresses action</p> <p>explanation: a genre of writing whose purpose is to explain a phenomenon in sequence</p> <p>general: naming a group; not specific</p> <p>noun: a word that names a person, place, thing, or idea</p> <p>precise: exact; specific</p> <p>present tense: happening now</p> <p>revision: change made to improve writing</p>
Materials and Preparation	<ul style="list-style-type: none">● highlighters, in two colors● Crashing Waves chart, from Week 5, Day 4 <p>Highlight the nouns in one color and the adjectives (including prepositional phrases that describe the nouns) in another color. See the following example (nouns are highlighted in white, adjectives in dark gray).</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"><p>Crashing Waves</p><p>Waves <u>crash</u> against the <u>shore</u>, changing its <u>shape</u>.</p><div style="display: flex; justify-content: space-around; margin-top: 10px;"><div style="border: 1px solid black; width: 150px; height: 50px;"></div><div style="border: 1px solid black; width: 150px; height: 50px;"></div></div></div>

	<div style="border: 1px solid black; padding: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Strong ocean waves <u>crash</u> against the shore.</p> <div style="border: 1px solid black; height: 60px; margin-top: 10px;"></div> <p>The waves <u>throw</u> the loose material back at the shore.</p> <div style="border: 1px solid black; height: 60px; margin-top: 10px;"></div> <p>The waves <u>take</u> away pieces of the cliff and <u>bring</u> them to a new area.</p> </div> <div style="width: 45%;"> <p>Ocean water slowly <u>erodes</u> soft rock and <u>breaks</u> chunks off the bottom of the cliff.</p> <div style="border: 1px solid black; height: 60px; margin-top: 10px;"></div> <p>Eventually, the cliffs <u>break</u> apart from the crashing.</p> <div style="border: 1px solid black; height: 60px; margin-top: 10px;"></div> <p>The eroded pieces from rocky cliffs <u>can become</u> a sandy beach not far away.</p> </div> </div> </div> <ul style="list-style-type: none"> ● Explanation anchor chart images: language, cut apart ● Explanation anchor chart, from Week 5, Day 2 ● jointly constructed explanation
<p>Opening 1 minute</p>	<p><i>Yesterday we learned that explanations include present tense action verbs. Today we are going to examine the other important language features of explanation.</i></p>
<p>Deconstruction and Revision: Nouns 15 minutes</p>	<p>Show the Crashing Waves chart.</p> <p><i>Let's take a look at the nouns in explanations. Remember, a noun names a person, place, thing, or idea. I highlighted the nouns in the Crashing Waves explanation. Listen as I read just the nouns and think about what is the same about them.</i></p> <p>Point to and read just the highlighted nouns and harvest the children's ideas.</p> <p><i>The nouns in explanations do not name one specific place or thing; they are called general nouns. For example, in the Crashing Waves explanation the nouns could name any wave on any shore. This explanation talks about what all waves do as they crash into all shores. This could be about Popham Beach, or it could be about the coast of India, or anywhere else.</i></p> <p><i>Let's go back to our class explanation and make sure that the nouns</i></p>

	<p><i>that we used are general, that they could talk about any wave on any shore.</i></p> <p>Reread the class explanation, highlighting the nouns and discussing whether they are general or specific. Revise any specific nouns.</p>
<p>Deconstruction and Revision: Adjectives 15 minutes</p>	<p><i>When we learned about procedures and reports, we discussed the importance of adjectives in making them precise and adding more information. Remember that adjectives give more information about nouns, often answering questions such as How many? and What kind? Listen carefully as I read the last sentence without any adjectives.</i></p> <p>Read “The pieces can become a beach not far away.”</p> <p><i>What are the pieces? In this sentence, there are no adjectives to describe what the pieces are. In the original version the phrase says “Eroded pieces from rocky cliffs.” With the adjectives “eroded” and “from rocky cliffs,” we know that the pieces are pieces of a cliff that have been washed away by waves.</i></p> <p><i>Let’s look at one more sentence.</i></p> <p>Read the first sentence: “Strong ocean waves crash against the shore.”</p> <p><i>Robin Koontz uses two adjectives in a row in this sentence. She does not just say “waves,” but she tells the reader that they are strong waves and that they are ocean waves. She packs a lot of information into only three words.</i></p> <p><i>Let’s go back to our class explanation and make sure that it includes adjectives that pack as much information as possible into our sentences.</i></p> <p>Reread the class explanation sentence by sentence, using the guidance below for revision.</p> <p>If a sentence does not include an adjective, discuss whether to include one (or more). Use the following questions to elicit adjectives:</p> <p><i>How many/much?</i> <i>What kind?</i> <i>What like?</i> <i>Which ones? Whose?</i></p> <p>If the adjectives are spread out over several sentences (for example, “The waves are strong. They are in the ocean.”), revise to pack the information into one sentence or phrase (“Strong ocean waves”).</p>

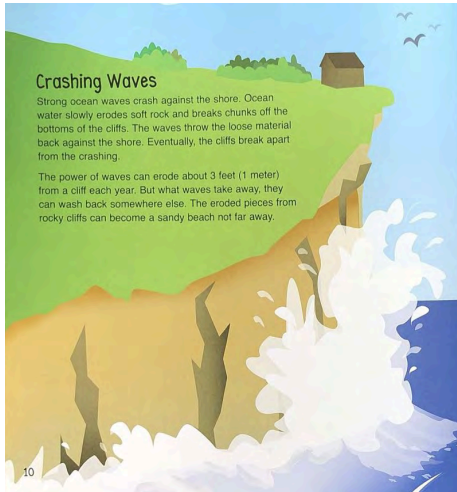
<p>Closing 1 minute</p>	<p>On the Explanation anchor chart, under the Stages section, write Language. Add the language anchor chart images to the chart.</p> <p style="text-align: center;"><i>We learned a lot about the language of explanations and revised our writing. Tomorrow you will begin to write your own explanations!</i></p>
<p>Standards</p>	<p>Standard W.2 Develop, strengthen, and produce polished writing by using a collaborative process that includes the age-appropriate use of technology.</p> <p>W.2.2.a With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.</p> <p>L.1.2.e Use adjectives and adverbs and choose between them depending on what is to be modified.</p> <p>L.1.2.a Use collective nouns (e.g., group).</p> <p>L.1.2.b Form and use frequently occurring irregular plural nouns (e.g., feet, children, teeth, mice, fish).</p>
<p>Ongoing assessment</p>	<p>Review the whole class discussion.</p> <p>What feedback do children provide?</p> <p>What evidence shows that children have internalized the roles of nouns and adjectives in explanation?</p> <p>What suggestions do they make for revision?</p>

Notes

Explanation anchor chart images

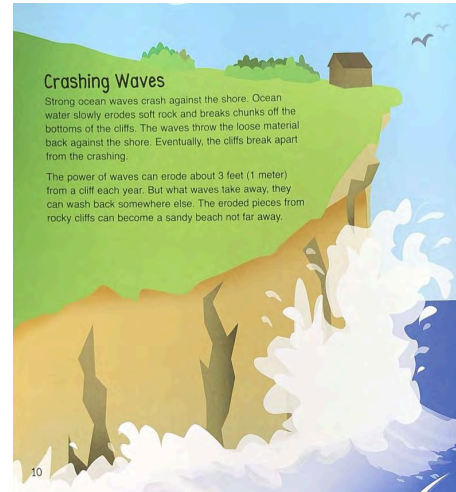
language

present tense **action verbs**



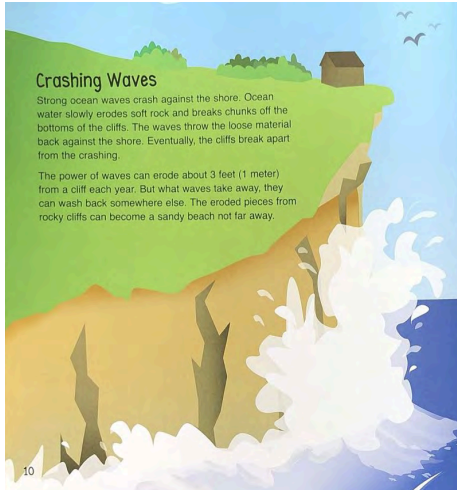
Strong ocean waves crash against the shore.

general nouns



Strong ocean **waves** crash against the **shore**.

adjectives that pack information



Strong ocean waves crash against the shore.

Unit 2: The Forces of Wind and Water

WEEK 6 Day 4

Writing Explanation

Individual Construction: Completing Captions and Phenomenon Statement

Content Objective	I can add information about erosion to my caption. (W.3.2, Standard W.2, W.1.2.a, W.1.2.b)
Language Objective	I can discuss with a partner which phenomenon statement matches our landform, and why. (SL.1.2)
Vocabulary	<p>explain: to describe in detail</p> <p>explanation: a genre of writing whose purpose is to explain a phenomenon in sequence</p> <p>explanation steps: the phenomenon explained, in order</p> <p>phenomenon statement: the beginning of an explanation, where the phenomenon is introduced</p>
Materials and Preparation	<ul style="list-style-type: none">● class copy of the Popham Beach Caption slides, from Week 4● children’s writing folders, including Caption Templates from Week 4● pencils● <i>Erosion: Changing Earth’s Surface</i>, Robin Koontz; <i>How Do Wind and Water Change Earth?</i>, Natalie Hyde; and Science and Engineering packets, available for children’s reference● jointly-constructed explanation● Phenomenon Statements sheet, one for each pair <p>Before the lesson, identify pairs of children writing about the same landform. Plan for them to sit and talk together throughout the lesson.</p> <p>On the whiteboard, write:</p> <ul style="list-style-type: none">water erosion by riverswater erosion by glacierswater erosion by waveswind erosion

<p>Opening 1 minute</p>	<p><i>Today you will begin to write an explanation of one type of erosion. To identify the type of erosion you will explain, we are going to start with our landform captions.</i></p>
<p>Individual Construction 16 minutes</p>	<p>Show the Popham Beach Caption Template. <i>Before writing our class explanation we went back to the photo of Popham Beach and identified the type of erosion that is going on there. We added another sentence to our caption to identify the type of erosion.</i></p> <p>Distribute Caption Templates. <i>Look at your landform and think about what type of erosion has been shaping it. Your choices are here on the board: water erosion by rivers; water erosion by glaciers; water erosion by waves; or wind erosion. Talk to your partner to identify the type of erosion that is shaping your landform and why you think that. Once you have identified the type of erosion, write another sentence in your caption. For example, we wrote in our Popham Beach caption, [read the second sentence of the Popham Beach caption]. If you are having trouble identifying the type of erosion, talk to the other children who have the same landform. You can also check in one of our erosion books, or in your Science and Engineering packet.</i></p> <p>Send the children in pairs to sit with others who are writing about the same landform. As the children write, circulate to support their work. Check in to make sure that they correctly identify the types of erosion shaping their landforms.</p>
<p>Joint Construction 12 minutes</p>	<p>Gather the children back together. <i>When we wrote together as a class, we identified Popham Beach as one example of a place where water erosion by waves is happening. Then, we wrote our explanation about water erosion by waves. You are going to do the same thing. Your landform is one example of a place where erosion is happening, and you will write an explanation of that type of erosion.</i></p> <p>Show the jointly-constructed phenomenon statement. <i>Explanations begin with a phenomenon statement, which identifies what the explanation will be about. Here is what we wrote together.</i></p> <p>Read the jointly-constructed phenomenon statement.</p> <p>Distribute the Phenomenon Statements sheets and pencils to pairs. <i>On this sheet are four phenomenon statements, for the four types of erosion we discussed. Let's read the statements together. As we</i></p>

	<p><i>read, think about the one that fits with the type of erosion shaping <u>your</u> landform.</i></p> <p>Use shared reading to read each statement of phenomenon. Stop to clarify/define any unfamiliar words.</p> <p><i>Which phenomenon statement makes sense for your explanation? Talk to your partner. When you decide which one fits, draw a star next to it.</i></p> <p>Circulate to support the children as they work. Have several pairs share which phenomenon statement they chose and why.</p>
<p>Closing 1 minute</p>	<p><i>Next you will continue your explanations by writing the explanation steps!</i></p> <p>Have children put their Caption Templates in their writing folders, and have one child from each pair put the Phenomenon Statement sheet in their folder.</p>
<p>Standards</p>	<p>W.3.2 Use a combination of drawing and writing to communicate a topic with a beginning, middle (including details), and an end.</p> <p>Standard W.2 Develop, strengthen, and produce polished writing by using a collaborative process that includes the age-appropriate use of technology.</p> <p>W.1.2.a Investigate questions by participating in shared research and writing projects.</p> <p>W.1.2.b Gather information from provided sources and/or recall information from experiences in order to answer questions.</p> <p>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.</p>
<p>Ongoing assessment</p>	<p>Collect the children’s folders and review their Caption Templates and Phenomenon Statement sheets.</p> <p>Do the children correctly identify the types of erosion to match their images? If not, what are their confusions?</p>

Phenomenon Statements

Wind wears away rock.

Glaciers carve out valleys.

Rivers carve out canyons.

Crashing waves change shorelines.

Explanation Observation Tool

Child's Name: _____

Date: _____

	Yes, date observed and notes	Not Yet, notes and next steps
Structure		
<p>Phenomenon Statement: names the phenomenon introduced in the explanation.</p> <p><i>Note that children are not writing this on their own, but choosing from a set.</i></p>		
<p>Explanation Steps: includes all parts of the explanation, explained in order</p>		
Medium: Poster		
<p>Illustrations: Illustrations are clear and match the words; show change over time</p>		

	Yes, date observed and notes	Not Yet, notes and next steps
Language		
Verbs: uses present tense action verbs		
Nouns: uses general nouns, naming a group or class, rather than something specific (e.g. "cliffs," rather than "the cliff at Thompson Island")		
Adjectives: words and prepositional phrases are used to describe the nouns; adjectives are packed into sentences, rather than spread out over several sentences (e.g. "strong ocean waves," rather than "The waves are strong. The waves are from the ocean.")		

Suggestions for Week 8 revisions, based on observations