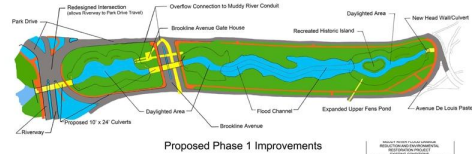


## Unit 2: The Forces of Wind and Water

### WEEK 7 Day 2



### Text Talk The Muddy River (slides)

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Big Ideas</b>          | <p>Wind and water can change the shape of the land.</p> <p>People can change the shape of the land.</p> <p>The changing shape of the land impacts people.</p> <p>Changes happen over time.</p>                                                                                                                                                                                                                                                  |
| <b>Weekly Question</b>    | How can people prevent or slow erosion?                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Content Objective</b>  | <p>Based on details in the slides, I can describe changes in the Muddy River over time. (R.6.2.b)</p> <p>I can explain how people tried to address erosion in their environment, specifically with the Muddy River. (2.T2.4)</p> <p>I can apply my understanding of erosion in different contexts around the world to discuss the problem of the Muddy River. (2-ESS2-1.)</p>                                                                   |
| <b>Language Objective</b> | Based on my growing knowledge of erosion, I can ask and answer questions about how people are responding to erosion along the Muddy River. (SL.2.2.b)                                                                                                                                                                                                                                                                                           |
| <b>SEL Objective</b>      | I can talk with my partner and together evaluate the problem with the Muddy River. (Relationship Skills, Decision Making)                                                                                                                                                                                                                                                                                                                       |
| <b>Vocabulary</b>         | <p><b>context:</b> the situation in which something happens</p> <p><b>bank:</b> slope that borders a stream or river</p> <p><b>dredge:</b> to clean out the bed (bottom) of a river, lake, or other body of water by scooping out mud, weeds, and rubbish</p> <p><b>landscape architect:</b> a person who builds with land, plants, and water</p> <p><b>restoration:</b> the act of bringing something back to how it used to be (*restore)</p> |

Text Talk U2 W7 D2

|                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Materials and Preparation</b>                        | <ul style="list-style-type: none"> <li>• The Muddy River slides</li> <li>• projector and screen</li> <li>• Muddy River Images: Map, Photograph, and Plans, copy for each pair of children</li> <li>• crayons, for Matching Crayons routine</li> <li>• chart paper<br/>Prepare a new chart, Slowing and Preventing Erosion, with at least half of the space left empty for work in Week 7, if not already prepared.</li> <li>• Examples of Approaches to Slowing and Preventing Erosion, from Week 6, Day 2: Muddy River image</li> <li>• gluestick</li> </ul> |
| <b>Opening</b><br>1 minute                              | <p>Introduce the slides and set a purpose for reading.</p> <p><i>Today we will learn about a river known as the Muddy River. This river is located in a city called Boston, in Massachusetts. We will look at some slides. We'll ask and answer questions about how the Muddy River has changed over time and how people are addressing the problem of erosion along the river.</i></p>                                                                                                                                                                       |
| <b>Text and Discussion</b><br>33 minutes<br><br>slide 2 | <p><i>Frederick Law Olmstead was born about 200 years ago.</i></p> <p>Read the caption on the slide, noting that this portrait is by a noted American painter, dated about 130 years ago.</p> <p><i>Frederick Law Olmstead is famous as a <b>landscape architect</b>: someone who designs and builds with land, plants, and sometimes water. He is known for creating many large parks in cities all around the country, including around the White House in Washington, DC and Central Park in New York City. And...</i></p> <p>Click to the next slide.</p> |
| slide 3                                                 | <p><i>... this park, Franklin Park, in Boston. Olmstead believed that parks should be places where all kinds of people in a community could gather and relax. Here we see Olmstead's drawn plans for the park, and an entrance to the park today.</i></p> <p><i>Does this remind you of any parks near us?</i></p>                                                                                                                                                                                                                                            |
| slide 4                                                 | <p><i>Here is an old postcard [ca. 1930-1945] showing the park from an artist's <b>aerial perspective</b>—as seen from the air.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                       |

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| slide 5-6    | <p><i>People noticed that the Muddy River, which runs right through the city of Boston, was sometimes flooding. The water was getting dirty and people were getting sick.</i></p> <p><i>This happened in many cities, and one approach to this problem has been to bury the river and make it run through pipes instead of over the land. In Boston, this was part of a plan to address the problem of the Muddy River.</i></p>                                                                                                                                                                                                                             |
| slide 7      | <p><i>Frederick Law Olmstead believed that the river could be healthy and enjoyed by all. Here is his plan. He designed a park that includes the Muddy River,- it is called the Emerald Necklace.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| slide 8      | <p>Distribute the Muddy River Images: Map, Photograph, and Plans.</p> <p>Refer to the slide and to the corresponding map on the children's copies.<br/><i>Describe what you see. How was the Muddy River included in the park?</i></p> <p><i>An <b>emerald</b> is a green stone. You probably know what a <b>necklace</b> is. When you look at this map, can you guess why the park along the Muddy River has the name "Emerald Necklace?"</i></p>                                                                                                                                                                                                          |
| slide 9      | <p><i>How about now, when you look at this photograph from above? The Emerald Necklace has been an important park in this city for a long time.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| slide 10     | <p><i>This slide shows a part of the Emerald Necklace called the Fens. Put your thumbs up if you have ever been there.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| slides 11-12 | <p><i>The parks along the river are important and beautiful but have also had some problems.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| slide 13     | <p><i>Here's one more picture of the river.</i></p> <p>Click the animation for two ovals to appear.<br/>Use the Matching Crayons routine so that children can exchange ideas with new partners and to insert a movement break. Make sure each pair has a copy of the printed images. Have children turn to the corresponding image in their copies.</p> <p><i>Do you notice how these two trees are leaning over the water? What do you think might make this happen? Does this remind you of any other place we have looked at?</i><br/><i>Turn and talk to a partner about your ideas. Make sure to ask your partner what they are thinking, too.</i></p> |

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Bring the group back together, collect the crayons, and facilitate a short conversation to make the connection to the trees Popham Beach losing soil to hold their roots.</p> <p><i>Might that same thing that we see on Popham Beach be happening here?</i></p> <p>Speak especially slowly and clearly so that children can create a mental picture:</p> <p><i>One thing that happens when the <b>banks</b>, or sides, of a river erode is that when the water rises—maybe because of a big rainstorm or because more water is flowing into the river—it floods. The natural borders of the river can’t hold the water. Maybe you have seen this happen in your investigations in the Landforms and Water Table.</i></p> <p>Continue explaining:</p> <p><i>With big rains, the Muddy River flooded. It flooded because the river was clogged up or stopped in some places, and the water couldn’t flow through as it naturally would. The pipes weren’t big enough to carry the water fast enough. The banks of the river were eroded, so they couldn’t contain, or keep in, all the water. The water spilled out over the banks of the river into streets, sidewalks, parks, parking lots, and train stations.</i></p> <p><i>Can you imagine how this would feel here in our town?</i></p> <p><i>Turn and talk to a partner about what you are picturing. Listen carefully to see if the pictures in your minds match!</i></p> <p>In the whole group, invite a few children to share their mental pictures.</p> |
| slides 14-15 | <p><i>How does what you imagined compare with these photographs?</i></p> <p><i>So what do we do about this?</i></p> <p><i>A group of engineers have been working on this project for several years.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| slide 16     | <p><i>This graphic shows how the river looked before the project started. There is a lot of information included in this graphic. Let’s focus on the river itself. What color is used to represent the river here? [blue]</i></p> <p><i>Take a look with your engineer’s eyes. Can you see any sections where the river might have been forced through pipes underground? Do you see any areas that might experience flooding?</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| slide 17                                                           | <i>This graphic shows the plan for the project to change how the Muddy River is flowing.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| slide 18                                                           | <p><i>Notice the difference in the path of the river from the first graphic.</i></p> <p>Refer children to the page with printed plans, corresponding with this slide, and redistribute the crayons to use the Matching Crayons routine with new partners.</p> <p><i>What do you notice about these plans? How do you think the new design will change the river?</i></p> <p><i>This project is called a <b>restoration</b> project. Restoration includes the word <b>restore</b>, which means to return something to how it used to be. This project's goal is to make the Muddy River more like it was in Frederick Law Olmstead's time, when he first designed the Emerald Necklace park.</i></p>                                                                                                                   |
| slide 19                                                           | <i>The restoration project is continuing today!</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Introduce Slowing and Preventing Erosion Chart</b><br>5 minutes | <p>Introduce a new chart.</p> <p><i>Today we'll fill in this chart with information from our look at the Muddy River.</i></p> <p><i>At the Muddy River, people have approached the problem of erosion by restoring the river, rebuilding parts of it as it used to be naturally. We'll write that here.</i></p> <p>Record this idea next to "Approach."</p> <p><i>Why are they doing this?</i></p> <p><i>We'll write that on the next line, "Reason:" to keep the river from flooding and to make the river healthier again.</i></p> <p>Record.</p> <p><i>This next line is where we will write the specific example of the Muddy River.</i></p> <p>Record and affix the card.</p> <p>Note: This is the final Slowing and Preventing Erosion chart. All charts will be used again during Text Talk Week 7, Day 5.</p> |
| <b>Closing</b><br>1 minute                                         | <p><i>Today we explained how people responded to the problem of erosion at the Muddy River over time.</i></p> <p><i>Have you noticed any kind of erosion near us?</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standards</b>          | <p><b>R.6.2.b</b> Describe the relationship between a series of events, ideas, or concepts, using language that pertains to time, sequence, and cause/effect.</p> <p><b>SL.2.2.b</b> Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.</p> <p><b>2.T2.4</b> Explain and describe human interaction with the physical world (the environment).</p> <p><b>2-ESS2-1.</b> 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><b>SEL.</b> Relationship Skills</p> <p><b>SEL.</b> Decision Making</p> |
| <b>Ongoing assessment</b> | <p>The unit is beginning to wrap up, and children have examples from near and far to draw on in order to approach this story and problem of the Muddy River.</p> <p>What connections do they make?</p> <p>What understandings do they draw on to discuss this situation?</p> <p>How flexible is their thinking?</p> <p>Listen in to children’s partner conversations and take notes that will serve to support them as they consolidate understanding and develop a recommendation for Popham Beach at the end of Week 7 and into Week 8.</p>                                                                                                                                                                      |

|                     |
|---------------------|
| <p><b>Notes</b></p> |
|---------------------|