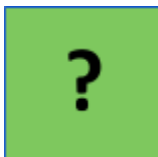
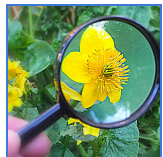


Unit 2: The Forces of Wind and Water

WEEK 5 Studios



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

Children represent wind with art media and tell stories involving wind, construct water-based landscapes and simulate erosion, and review classroom resources to consolidate knowledge.

Big Ideas	Wind and water can change the shape of the land. Changes happen over time.
Weekly Question	How can wind change land, and why does it matter?
Materials and Preparation	• new studios prompts Cut apart and replace studios prompts. • Observation Sheets, on clipboards <u>New for the Art Studio:</u> • children's book covers and illustrations depicting wind • any variety of art materials introduced to date: colored pencils, crayons, watercolor paints, collage, Beautiful Stuff • variety of papers according to media available (drawing, watercolor, and/or construction papers of different sizes) • tools needed according to media available (brushes, pens, scissors, glue and spreaders) Based on children's interests and explorations to date, choose and organize a limited number of art materials and tools. Set these up to promote intentional choices and work. <u>New for the Building Studio:</u> • craft sticks • paper of various weights, cut in quarter sheets • glue and glue spreaders • Beautiful Stuff • trays or a designated shelf for drying built structures

Studios U2 W5

	Arrange materials and work space to encourage careful work. <u>New for the Research Studio:</u> • all Unit 2 print resources provided to date • Weekly Question charts • sticky notes • writing tools, including markers <u>New for the Math Studio:</u> <u>New and ongoing for the Discovery Studio</u> • Types of Landforms images • Landforms and Water Table • sand • soil • clay • rocks • container with water • straws • scissors • Science and Engineering packets • pencils and colored pencils <u>New for the Writing and Storytelling Studio:</u> • children’s book covers and illustrations depicting wind (shared with Art Studio) Prepare the Opening Basket with a few sample materials from each studio, along with the Studios Planner and prompts. Decide which day(s) to host a Thinking and Feedback meeting, and plan Studios time accordingly.
Opening	<i>We are thinking a lot about wind this week! In Studios, you’ll be exploring wind in different ways, as well as continuing other work you’ve been doing. This week’s question is How can wind change land, and why does it matter?</i> <i>In the Art Studio, we have some illustrations from children’s books—some of them might be familiar to you! In these illustrations wind is, in some way, part of the picture. How do <u>you</u> see wind? How can you represent it on paper? You can use these materials [name tools and materials selected] to show</i>

	wind in your own works of art. <i>In the Building Studio, you'll think about wind and water as you design and build structures that might be affected by changing land. [Show selected materials.] See what kinds of small buildings you can construct that might be found near a river or sea. When the glue has dried on your structure, you can see what happens with different kinds of erosion in the Discovery Studio's Landforms and Water Table.</i> <i>In the Discovery Studio you will work in the large Landforms and Water Table to investigate what kind of erosion creates certain kinds of landforms. We'll use the landforms images you have been looking at in Writing. Choose a landform image. Then, in your packet, write the name of your landform and the type of erosion you will investigate. Build the landform using sand, soil, rocks, or clay—or a combination of these. Then draw a diagram of it. Think about what kind of erosion might shape a landform like that, and try to recreate that kind of erosion using wind or water. Then, after conducting your investigation, draw how the landform changed. Finally, imagine what this landform might look like after many years of erosion. In the last box, draw a picture of what you imagine. Write down any notes about your observations, ideas, and questions.</i> <i>All of the resources we have used so far in our study of the forces of wind and water on land are in the Research Studio. Look through them and talk with your classmates about new ideas and questions you are having. Write down connections you are making and important words you are using on our Weekly Question charts. You can write directly on the charts or on sticky notes and attach them to the charts where they connect.</i> <i>Of course, you can always read some of the books we have about the forces of wind and water or write more book introductions, as well.</i> <i>In the Math Studio, We will play a game called Target Measurements with a partner. You will choose an object and a unit of measurement to measure your object with.</i> <i>Finally, in the Writing and Storytelling Studio... you guessed it: try telling some stories that feature wind!</i>
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	<i>There are lots of new choices in studios this week. Turn and talk to a partner about where you might begin your work.</i> Dismiss children to work. Because so many of the Studios activities are new this week, children may need support making choices and settling into their work.
Facilitation	Help children consider the possibilities for studios work. Remind them of the Weekly Question. Offer texts to inspire or direct their work, as useful. Once children are working, circulate through all of the studios to see which activities grab their interest and how they approach various tasks. Use the observation sheet to record activities; conversations; strategies children use; challenges they face; and ways they interact with each other and with the materials and processes.

Art 	What does wind look like? <u>Content Objective:</u> I can choose and use art media to represent wind. <u>Process:</u> Children peruse book covers and illustrations depicting wind. They choose any of the art media introduced to date and use them purposefully to create images. <u>Facilitation:</u> <i>What do you notice in this illustration?</i> <i>What materials do you think this artist used?</i> <i>What makes this an effective illustration?</i> <i>How do you see wind? How can you represent it on paper?</i> <u>Thinking and Feedback Possibilities:</u> When children bring their images to the group, focus the feedback on choice of material and effectiveness in depicting wind. Viewers might describe what they see in the picture and how use of materials and/or processes gives them that feeling or impression. Feedback might focus on other materials or processes an artist could add or try next. <u>Ongoing Assessment:</u>
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	Look for ways in which children’s representations communicate their understanding of the movement and effects of wind. Consider the purposefulness they have brought to choices in materials, processes, and visual presentation. Look for an awareness of audience, and compare this to children’s consideration of audience in their writing and speaking.
Building 	Building Riverbank and Seaside Structures <u>Content Objective:</u> I can build a structure with attention to detail and with carefully chosen materials. <u>Process:</u> Using craft sticks, paper, Beautiful Stuff, and liquid glue, children make miniature structures to add to the Landforms and Water Table. (In the Discovery Studio, in Week 6, children create landscapes of land and water and situate their structures near the water to see what effects erosion may have on them.) <u>Facilitation:</u> <i>What kind of structure are you building? What materials are you using to build it? Why did you choose these?</i> Encourage children to think about properties of materials, as studied in Unit 1. <i>Are you thinking about a certain part of a landscape where this structure might be found?</i> <i>Is there a particular resource in our classroom that has inspired you to build this?</i> <u>Thinking and Feedback Possibilities:</u> Children can offer feedback on many elements of design: aesthetics, sturdiness, appropriateness for a particular environment, materials and techniques for building. <u>Ongoing Assessment:</u> How have children consolidated knowledge from Unit 1 Science and Engineering lessons and experiences? How are they thinking about landscapes and the kinds of structures that will be successful in different areas, related to landforms and forces of water and wind?
Discovery	Creating Erosion <u>Content Objective:</u> I can simulate erosion and make predictions about erosion’s impact on



landforms.

Process:

Working at the classroom Landforms and Water Table, children build on and inform their Writing work.

From the selection of images used for writing explanation, working collaboratively or independently, children choose a landform to investigate. By looking closely at the image, they determine what kind of erosion—wind, water, or wind and water together—might create this kind of landform.

At the Landforms and Water Table, children build the chosen landform with sand, soil, rocks, and/or clay. Then they exert water and/or wind to erode it. Once they see that the landform has changed, they record the changes in their packets. Then, they draw what the landform might look like in the future, after many years of erosion.

Facilitation:

Encourage children to work methodically as they consider, build, and erode the landforms.

Ongoing Assessment:

Many of the images of landforms look permanent. This is an opportunity to gauge children’s understanding that change from erosion happens over long periods of time.

Notice how children talk about the phenomenon of erosion.

What evidence from images do children cite as they discuss what kinds of erosion might create different landforms?

What other resources do they draw upon to inform their experiments?

Do children make reasonable predictions?

How do they record what they find?

Math



Target Measurements

Objective:

I can estimate the length of an object and verify its actual target measurement.

Process/Directions:

- Partner A:
 - Choose an object. The length of this object will be the target measurement.
 - Choose a target length:
 - inches (up to 10) or

	■ centimeters (up to 30) ○ Begin to draw a line with a straightedge. ● Partner B: ○ Say "Stop!" when you think the length of the line is equal to the target measurement. ● Both partners measure the line. ● Both partners find the difference between the length of the line and the target measurement. The difference is Partner B's score for the round. For example: target measurement was 13cm, line was 9 cm, my score would be 4 (13-9=4) ● Take turns. After 8 rounds, the player with the lowest total score wins. <u>Facilitation:</u> Be sure to visit the Center and model how to play the game. Support children with their target measurements and comparing. <u>Ongoing Assessment:</u> Note children's strategies for estimating, measuring, and finding the difference. What are they noticing about their estimations? How are they working together to play the game?
Research 	Understanding Land and How It Changes <u>Content Objective:</u> I can review, discuss, and write questions about images, maps, and other resources in our classroom. <u>Process:</u> Organize the classroom collection of print resources connected to various lessons and experiences so that children can easily access them. They might be put in sheet protectors in a binder, hung on a wall or bulletin board, or organized in folders or bins. Children peruse and compare these and talk about what they find. They write connections and important vocabulary words on the Weekly Question charts. <u>Ongoing Assessment:</u> Note connections children make among resources and Weekly Questions. How do they apply information from one context to another? How complex are their conversations? What evidence points to children consolidating knowledge? How do children articulate their growing knowledge?
Writing and Storytelling	Wind Stories <u>Content Objective:</u> I can imagine stories involving wind.



Process:

Working collaboratively, children tell, write, draw, and enact stories in which wind plays a part. Wind might be a character or an element of the setting; the plot might turn on an effect of wind. Children might begin by perusing illustrations in the Art Studio. Characters might include landforms that change. Children include these stories in their Storytelling Books and act them out with the whole group during Story Acting.

Facilitation:

Encourage children to act out a variety of roles: wind and other elements of weather, water, landforms, and features of landscapes (such as trees and other plant life), along with human and animal characters. Encourage children to communicate a single story in a variety of ways: telling, drawing scenes, writing, acting.

Thinking and Feedback Possibilities:

Invite children to share their stories through reading, telling, and acting. Children in the group may ask questions about how the story originated, as well as offer feedback for revising or continuing the story.

Ongoing Assessment:

How are children integrating knowledge they are building about landforms and the effects of wind and water into their stories? What new connections are they making? What ideas emerge in stories that can add to the class discussion and expand others' understanding?

Standards

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) and the following studio-specific standards.

Discovery:

W.1.2.a Investigate questions by participating in shared research and writing projects.

2-ESS2-4(MA). Observe how blowing wind and flowing water can move Earth materials from one place to another and change the shape of a landform.

Math:

2.MD.A.1

	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. 2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters. <u>Research:</u> R.8.2.b Explain how various text features (e.g., headings, bold print, index, graphics, tables of contents, glossaries, links, icons) are used to locate key facts or information in a text efficiently. R.11.2.a Use illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot. R.11.2.b Compare and contrast two or more versions of the same story presented in diverse forms
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Notes