

Unfit 2: The Forces of Wind and Water

WEEK 3 Studios



Exploring Impacts of Water

Watercolor paints are introduced and stream table experiments continue from the Science and Engineering lesson. Children follow procedures for using K’NEX and write introductions for classroom books.

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| Big Idea | Wind and water can change the shape of the land. |
| Weekly Question | How can water change land, and why does it matter? |
| Materials and Preparation | <ul style="list-style-type: none"> ● new studios prompts ● Cut apart and replace studios prompts. ● Observation Sheets, on clipboards <p><u>New for the Art Studio:</u> Review the Painting with Liquid Watercolors information page. This page includes information about setting up the work space.</p> <ul style="list-style-type: none"> ● pencils ● watercolor paints ● small, clear containers, such as jars or plastic cups ● paper towels ● watercolor brushes ● watercolor paper, 6 x 9, one or two sheets for each child ● watercolor paper, 12 x 18, one sheet for each child ● trays to work on, optional ● a deep tray or shallow bin, large enough to hold the small paper without folding or bending it (such as an aluminum tray used in Science and Engineering lessons) <p>Place an inch of water in the bin and soak several sheets of paper in it. This can be done first thing in the morning so that the paper is fully saturated when used.</p> |

- a pitcher of water and a bowl or other container, if the classroom does not have an accessible sink (for cleaning and refilling paint cups)
- sponge or rag, for maintaining a neat work space
- watercolor images, in sheet protectors
Have these images available near the workspace, perhaps hung nearby as the table will become wet.

New for the Building Studio:

- K’NEX building set
- mentor texts from Writing:
 - Butterfly, from Week 1, Day 3
 - Coconut Tree, Swing Set, Fish, and Ice Cream Cone, from Week 2, Day 2
- other K’NEX instructions

New for the Discovery Studio:

- small stream tables with sand
- rocks, various sizes
- pitcher and other containers, filled with water
- blocks, to elevate one end of the stream tables
- Landforms and Water Table
- Science and Engineering packets
- Erosion Experiment procedure
- Pencils

New for the Math Studio:


- centimeter cubes
Each pair playing will need 12 centimeter cubes.
- paper clips and pencils
Children use paperclips to spin. They put the paperclip’s rounded end directly over the center dot of the spinner. They hold the paperclip in place by putting the tip of the pencil inside its rounded end and pressing down. Then children flick the paperclip to make it spin. When the paperclip stops spinning, it will “land” on one section of the spinner.
- Number Line Scoot Stage 1 [spinner](#)
- Number Line Scoot Stage 1 [Gameboard](#)


New for the Research Studio:


- one-inch, 3-ring binder, labeled Books To Read
- Book Introduction: Fiction sheets, multiple copies, 3-hole punched


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| | <ul style="list-style-type: none"> ● Book Introduction: Information sheets, multiple copies, 3-hole punched ● writing tools, including colored pencils <p>Note that children may write introductions for current and previous unit books, decodables, and any other available books.</p> <p>Prepare the Opening Basket with watercolor tools and materials, for a brief demonstration. Also include a few sample materials from each other studio along with the Studios Planner and prompts.</p> <p>Decide which day(s) to host a Thinking and Feedback meeting, and plan Studios time accordingly.</p> |
| <p>Opening</p> | <p><i>We have started reading and thinking about how water can impact the shape of the land. Let's look at water close up! In the Art Studio, we'll start working with watercolor paints. Even if you have used watercolors before, these might be different. I want to show you how we will use them. You can also take a look at these pictures of paintings by experienced watercolor painters for inspiration.</i></p> <p>In demonstrating use of watercolors, emphasize:</p> <ul style="list-style-type: none"> ● starting with only a small amount of liquid watercolor and water to prevent paints from becoming muddy; ● when paints should be replaced, and how; ● experimenting on small paper to get used to how the paints work before committing to a large piece (large watercolor paper is in limited supply); ● experimenting with both wet and dry papers; ● sketching lightly with pencil before beginning to paint; if desired; ● that paintings may or may not be representational. <p>In addition, make a connection to Unit 1, Properties of Materials: note that the properties of watercolor supplies (paper, brushes) are ideal for these liquid paints (compared to other paint supplies, this paper and these brushes are more absorbent).</p> <p>Very briefly, introduce the Building, Discovery, Math and Research Studios:</p> <p><i>In the Building Studio, we are going to use K'NEX. See if you can follow any of these procedures exactly.</i></p> <p><i>In the Discovery Studio, you can continue to explore how erosion works using the small stream tables or the classroom</i></p> |


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| | <p><i>Landforms and Water table. In the small stream tables, you can see how a steeper slope, or hill, affects how erosion happens. You might also have your own questions to investigate.</i></p> <p><i>In the Math Studio, we will play Number Line Scoot in partners. You will take turns spinning the spinner and moving your cube that number of times on the shared number lines. You can use your whole spin on one number line or split it between multiple number lines. Each time a cube lands exactly on the last tick mark of one of the number lines, the player who moved it keeps the cube and puts a new cube on zero on that number line. The first player to collect five cubes wins.</i></p> <p><i>Finally, in the Research Studio you can write book introductions of books you are reading. These introductions will help your classmates decide which books they might like to read, or which parts they might find most interesting. You can work on your own or with a classmate to complete your introductions. We'll keep them in this binder so that when you are looking for a book to read, you can find out what your classmates recommend.</i></p> <p>Show the Book Introduction sheets, differentiating between Fiction and Information, and run quickly through the sections on each, as time allows. Show the Books To Read binder in which completed introductions will be kept.</p> <p>This introduction will take a bit more time than in other weeks. Dismiss children to studios quickly.</p> |
| <p>Facilitation</p> | <p>Spend extra time in the Art Studio as children experiment with this new medium.</p> <p>Support children as readers and writers in the Research Studio.</p> |

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| <p>Art</p>  | <p>Exploring Watercolors</p> <p><u>Content Objective:</u> I can explore how water helps to move paint across paper.</p> <p><u>Process:</u> Children paint and observe the effects of the water and paint on wet and dry paper. For inspiration and challenge, children might look at images of watercolor paintings by experienced artists.</p> |
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| | <p><u>Facilitate</u> tick mark of one of the number lines, the player who moved it keeps the cube and puts a new cube on zero on that number line. The first player to collect five cubes wins.<u>tion:</u></p> <p>Watch for the productive use of materials, for active problem solving, and for the sharing of resources and strategies among children. Encourage children to work slowly in order to reflect on what they observe as they apply paint to the paper. Encourage them to compare their results to those of their classmates. Children may consult examples of watercolor paintings by established artists.</p> <p>Encourage children to write on separate paper what they have discovered about water and watercolor paints.</p> <p><i>What do you notice as the paint lands on dry paper? On wet paper?</i></p> <p><i>Why do you think that is happening?</i></p> <p><i>How can you record your discoveries about water and paint?</i></p> <p><i>What does this make you think about how water interacts with land?</i></p> <p><u>Thinking and Feedback Possibilities:</u></p> <p>Children will develop strategies for getting the effects they desire. They will also encounter surprises and, perhaps, frustration and disappointment, as the paint behaves in unexpected ways (especially on wet paper).</p> <p><u>Ongoing Assessment:</u></p> <p>How do children evaluate their work?</p> <p>How do they respond to frustration, or to results that differ from their intention?</p> |
| <p>Building</p>  | <p>Building with K'NEX</p> <p><u>Content Objective:</u></p> <p>I can follow procedures to build with K'NEX. I can record what I build in sketches and writing.</p> <p><u>Process:</u></p> <p>Children choose one K'NEX procedure and attempt to follow it exactly, relying on the procedure as written and drawn.</p> <p><u>Facilitation:</u></p> <p>Help children as they get organized: they will have to select the K'NEX pieces needed for the procedure and to keep track of the steps they have already completed.</p> |

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| | <p>If a structure does not turn out as planned, support children to assess whether this is an error in building, or whether the procedure writing needs revision. As appropriate, children give each other verbal or written feedback about the accuracy of their instructions.</p> <p><i>How are you keeping track of what you are doing?</i></p> <p><i>Is that how you thought it would look? What needs to be revised in your building?</i></p> <p><i>Could the procedure be revised to make it more clear?</i></p> <p><u>Thinking and Feedback Possibilities:</u></p> <p>Children can bring their built structures and what they have recorded along with the written procedures they are following. Feedback might offer strategies for following procedures or for representing what is built; the conversations might also result in refining the procedures themselves.</p> <p><u>Ongoing assessment:</u></p> <p>Pay attention to how children follow procedures, including sequencing steps and using this form of informational text.</p> <p>Take side by side photos of structures and recorded designs to assess how children translate three-dimensional objects into two dimensions; compare these to notes from the Building and Discovery Studios from previous weeks.</p> |
| <p>Discovery</p>  | <p>Experimenting with Water Erosion and Slope</p> <p><u>Content Objective:</u></p> <p>I can predict, observe, and record the effects of water erosion on sand with sloping landscapes.</p> <p><u>Process:</u></p> <p>Children set up small stream tables in the same way as in Science and Engineering lessons. They follow a procedure for creating a landscape with sand and rocks. They prop up one end of the stream tables to create a gentle slope and draw a sketch of their setup.</p> <p>Children determine where to pour water into the stream table and share their predictions about what will happen to the land and where the water will flow.</p> <p>They watch carefully as they pour the water and then draw a second sketch of their landscape, showing the water flow and effects on the soil and rocks.</p> <p>Children continue their experiments, recording their landscapes,</p> |

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| | <p>changing the slope, and making new predictions before pouring water. At the end of the session, they record their discoveries and new questions in their Science and Engineering packets.</p> <p>In addition, the classroom Landforms and Water Table serves as a place for children to work in larger groups and with a flat surface without drainage.</p> <p><u>Facilitation:</u> Stretch children’s thinking with questions such as these: <i>If the stream table has a steeper slope, what do you think might happen to the sand when the water flows through the landscape?</i> <i>Does the steepness of the slope affect the rate, or speed, of erosion?</i> <i>Do areas with rocks erode as fast as the areas without them?</i> <i>What do your observations make you think about the role of rocks and erosion?</i></p> <p><u>Ongoing assessment:</u> Take notes about how children integrate these experiences with knowledge they are building in more formal, guided experiments during Science and Engineering lessons. Note children’s spontaneous and contextualized use of content vocabulary. Note, also, their approach to setting up experiments and recording findings.</p> |
| <p>Math</p>  | <p>Number Line Scoot</p> <p><u>Objective:</u> I can represent whole numbers as lengths from 0 on a number line diagram.</p> <p><u>Process:</u></p> <ul style="list-style-type: none"> ● Place a small cube on zero on each number line. ● On your turn: <ul style="list-style-type: none"> ○ Spin the spinner. ○ Count aloud as you move that distance on one or more number lines. ○ You can use your whole spin on one number line or split it between multiple number lines. ● Take turns spinning and moving. ● If a cube lands exactly on the last tick mark of a number line, that player keeps the cube and puts a new one at 0. ● The first player to collect 5 cubes wins. |

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| | <p><u>Facilitation:</u> Be sure to visit the Center to help model the game.</p> <p><u>Ongoing Assessment:</u> How are children approaching the game? What math thinking are they leaning towards? Note how children approach the game socially.</p> |
| <p>Research</p>  | <p>Introducing Our Books</p> <p><u>Content Objective:</u> I can write an introduction for a fiction or informational text to help create a classroom resource.</p> <p><u>Process:</u> Children read books from the classroom library, including decodables, and choose one to introduce. Working with a classmate or independently, children choose the appropriate sheet (fiction or information) and complete it. Sketching the front cover in color makes it easier for others to find the book when browsing. Completed book introductions are added to the Books To Read binder.</p> <p><u>Facilitation:</u> Be sure to help children determine whether they need to use a Fiction or Information introduction sheet. Suggest to individual children or pairs specific books that they will be successful in introducing. Encourage children to look at completed introductions as models and for suggestions about books to read.</p> <p><u>Thinking and Feedback Possibilities:</u> Bring a book Introduction sheet and its book to the whole group. Children might give feedback on how useful the introduction is in informing and attracting other readers.</p> <p><u>Ongoing Assessment:</u> Do children choose texts they can read themselves? Do children identify features of fiction and informational texts? Do children identify important events and passages, and do they articulate why these are important? Note the depth (or superficiality) of children’s engagement with text. What kinds of texts do children gravitate towards?</p> |
| <p>Writing and Storytelling</p> | <p>Photo Stories</p> <p><u>Content Objective:</u> I can tell, act out, and write and draw stories inspired by images of places.</p> |



Ongoing Assessment:

Are children’s stories evolving in language structures, complexity, and/or vocabulary use?

Do children act out their stories in ways that enliven and enlarge them?

Is the idea of place central to the stories children tell and act out?

How are children recording their stories?

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.

Building:

RI.2.10. Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts, exhibiting complexity appropriate for at least grade 2.

Discovery:

2-ESS2-2. Map the shapes and types of landforms and bodies of water in an area.

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:

SR.C.3 Relate addition and subtraction to length

Research:

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

R.5.2.b Identify the main topic of a multi-paragraph text and the central ideas of specific paragraphs.

R.9.2.b Identify the main purpose of a text, including what the author wants to answer, explain, or describe.

W.3.2 Use a combination of drawing, and writing to communicate a topic with a beginning, middle (including details) and an end.

Writing and Storytelling:

W.3.2 Use a combination of drawing, and writing to communicate a topic with a beginning, middle (including details) and an end.

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.

SL.2.2.a Recount or describe key ideas or details from a text read aloud

