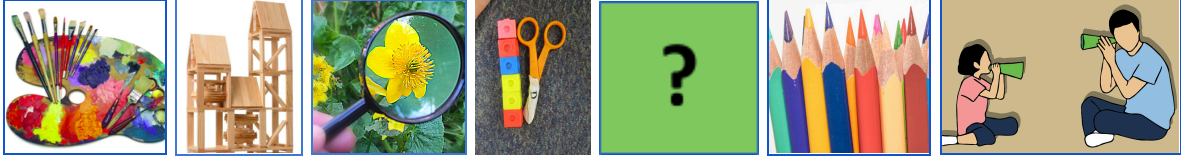


Unit 4: The Power of Pollinators

WEEK 4 Studios



**Exploring Pollination and Pollinators (continued)**  
Children choose familiar media to explore diverse pollinators and learn a new procedure in the Art Studio.

<b>Big Ideas</b>	<p>The parts of an organism have specific functions.</p> <p>Pollination is a result of animal behavior.</p> <p>Animals, including humans, benefit from and depend on pollination.</p>
<b>Weekly Question</b>	<p>How does pollination happen?</p>
<b>Materials and Preparation</b>	<ul style="list-style-type: none"> <li>● Parts of a Flower poster</li> <li>● new studios prompts Cut apart and replace studios prompts.</li> <li>● Unit 4 Observation Sheet</li> </ul> <p><u>New for the Art Studio:</u></p> <p>Note: Test the procedure and materials ahead of time. Be prepared to offer additional, specific guidance based on these trials.</p> <ul style="list-style-type: none"> <li>● <i>The Little Hummingbird</i>, Michael Nicoll Yahgulanaas</li> <li>● Printmaking Procedure, 2-4 copies in sheet protectors</li> <li>● scrap paper and pencils</li> <li>● cardboard, cut to about 4 x 6 inches, 1 or 2 pieces for each child</li> <li>● thin cardboard, such as from a cereal box, cut to about 2 x 4 inches, about 2 pieces for each child</li> <li>● scissors</li> <li>● liquid glue or glue sticks</li> <li>● tempera paint</li> <li>● paintbrushes</li> <li>● construction paper of different colors, cut to about 4 x 6 or a bit larger</li> </ul>

- brayers (rollers), cylindrical blocks, or small rolling pins (optional)
- paper towels and/or newspaper to cover work surface

New for the Building Studio:

- unit texts
- K'NEX
- Beautiful Stuff
- adhesives

New for the Discovery Studio:

- a collection of leaves, including examples of edible ones (kale, lettuce, arugula, etc.) and different-sized leaves of a single species
- lightweight paper, such as tracing paper or copy paper
- crayons, with paper removed
- white drawing paper, various sizes
- Science and Engineering packets
- pencils and colored pencils
- Erasers

New for the Math Studio:

- [Write the Number](#) Gameboard
- sheet protectors  
Place the gameboard in sheet protectors.
- dry erase markers

New for the Research Studio:

- unit texts, including brochures
- Massachusetts Native Plants and Pollinators poster
- Research Notes packet, one copy for each pair or trio of children

New for the Writing & Storytelling Studio:


- Storytelling Books or other notebooks
- shadow puppets from the Art Studio
- shadow puppet theatre
- "Wasp Poem," from Stations
- unit texts featuring pollinators

Decide which studios need particular attention in the opening, and prepare those studios bins for the meeting, along with the Opening Basket. Note that introduction of the Art Studio (Printmaking) may take

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	<p>extra time.</p> <p>Have sufficient copies of the Observation Sheet on clipboards.</p> <p>Decide which day(s) to host a Thinking and Feedback meeting, and plan Studios time accordingly.</p>
<p><b>Opening</b></p>	<p><i>We have some new activities in the studios this week to continue to explore the different pollinators we've been learning about.</i></p> <p><i>We'll read this story, The Little Hummingbird, later this week. But you can still use it for inspiration. Take a look: you'll notice that the images are all in one color, black. The shapes seem simple, but they communicate the story. You can follow this procedure to make a similar kind of print.</i></p> <p>Explain what a print is, and model and/or run through the procedure, as will be most helpful to the children.</p> <p><i>You made flowers out of K'NEX before...now can you build pollinators! You will probably want to look at some resources of different kinds of pollinators to make sure you include all of their important body parts. You can also use Beautiful Stuff, if you like.</i></p> <p><i>In the Discovery Studio you'll continue your careful observations and observational drawings. Pay special attention to the leaves of your plants. You may choose to work in your Science and Engineering Notebooks, or you may choose some other paper to work on. You can also measure your plants and add to your graphs.</i></p> <p><i>In the Research Studio, see what more you can find out about different pollinators. Work with one or two other researchers and use this Research Notes packet to record what you find. It's like the one you used to prepare for writing your plant reports.</i></p> <p><i>In the Writing and Storytelling Studio, you can continue writing and performing puppet plays. You can also write a poem inspired by a pollinator, like "Wasp Poem." What pollinator would you write about? What kind of picture or feeling would you want to communicate about that pollinator?</i></p>

	Children talk briefly with a partner about their plans and are then dismissed.
<b>Facilitation</b>	<p>Plan to spend extra time in the Art Studio to make sure children understand the procedure. Then circulate through the other studios and check in with children about what they are pursuing. Refer to the Weekly Question and to studio-specific prompts and resources.</p> <p>Direct children’s attention to each other’s work. Encourage them to ask each other for help and collaboration.</p> <p>Identify a piece of work for use during Thinking and Feedback and/or for planning purposes.</p>

<p style="text-align: center;"><b>Art</b></p> 	<p><b>Prints Inspired by <i>The Little Hummingbird</i></b></p> <p><u>Content Objective:</u> I can follow a procedure to create prints.</p> <p><u>Process:</u> The illustrations in <i>The Little Hummingbird</i> can inspire children’s work in printmaking, as both involve shape-based images. Children sketch drafts with ideas they may want to execute in a print. When they have decided on the shapes they need, they follow the Printmaking Procedure to create prints.</p> <p><u>Facilitation:</u> Offer material and conceptual help as children work, and refer them to each other for support and collaboration.</p> <p style="padding-left: 40px;"><i>Does the print look the way you expected? Why do you think that happened?</i></p> <p style="padding-left: 40px;"><i>Can you think of a way to solve this problem?</i></p> <p style="padding-left: 40px;"><i>What do you hope your audience sees in your print?</i></p> <p style="padding-left: 40px;"><i>Where are you getting your ideas for this print?</i></p> <p><u>Ongoing Assessment:</u> Pay attention to how children are using resources for inspiration and how they are following the procedure. Notice their care in use of tools and in execution of the process. Note whether they draw on the unit content in creating images.</p>
<b>Building</b>	<p><b>Building Pollinators</b></p> <p><u>Content Objective:</u></p>

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I can represent pollinators and include body parts that are important for pollination.

Process:

Children work with K'NEX and Beautiful Stuff to build pollinators, including as many parts as possible. They consult unit texts for reference.

Facilitation:

Make sure children can easily reference multiple sources for detailed images of pollinators. Support them in using precise and relevant vocabulary.

Thinking and Feedback Possibilities:

Children can bring their built pollinators to the group. In the whole group conversation, model naming the parts.

Ongoing Assessment:

Use the observation sheet to record what children are working on, what understandings and misconceptions are revealed in their work, and how they are interacting.

How do children understand the form and function of various pollinators?

How do they move between a two-dimensional representation and the three-dimensional representation they are building?

## Discovery



### **Ongoing Observations and Leaf Rubbings**

Content Objective:

I can make close observations, ask questions, and write notes about plants as they grow and develop.


Process:

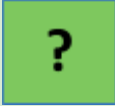
Children continue recording their observations of plants and measurements of plant growth, paying special attention to the development of leaves on the plants.

Children also create leaf rubbings, noticing the similarities and differences among the leaves. Using the sides of crayons on light paper gives the best effect.

Facilitation:

Engage children in conversation about what they notice about the leaves. Ask them what they know about leaves people eat, how they can describe parts of the leaves, and what questions they have.

	<p>Encourage them to think about the leaf’s function for the growth and development of the plant. [The veins circulate needed nutrients; the flat surface absorbs light.]</p> <p>Encourage children to use the conversation prompts provided. Support them with descriptive and precise language.</p> <p><u>Ongoing Assessment:</u>  Observe children as they work and engage them in conversation about what they notice and wonder.</p> <ul style="list-style-type: none"> <li>What descriptive language do children use?</li> <li>What connections do they make between what they see happening and what they understand about growing conditions?</li> <li>Do children look at all parts of the seeds and plants?</li> <li>What is the quality of their drawings?</li> <li>Do they record all relevant information?</li> </ul>
<p><b>Math</b></p> 	<p><b>Write Numbers</b></p> <p><u>Objective:</u>  I can skip count. I can make decisions about how many numbers to add onto a gameboard.</p> <p><u>Process/Directions:</u></p> <ul style="list-style-type: none"> <li>● Children play in partnerships.</li> <li>● Partner A chooses to skip count by 2, or 5, or 10. Both partners will skip count by this number.</li> <li>● Partner A writes the next 1, 2, or 3 numbers on the gameboard.</li> <li>● Partners take turns choosing how many numbers to write and then writing them.</li> <li>● The player who writes the last number on the gameboard wins.</li> </ul> <p><u>Facilitation:</u></p> <p><i>Tell me about your mathematical thinking with writing the next 1/2/3 numbers on the board.</i></p> <p><i>What is your plan for your next move?</i></p> <p><i>How can you be the last person who writes the number on the board?</i></p>
<p><b>Research</b></p>	<p><b>Researching pollinators</b></p> <p><u>Content Objective:</u>  I can read to find out more about pollinators and record what I learn.</p>



Process:

Working independently or collaboratively, children choose one pollinator for further research. They consult unit texts, including books and informational texts, and any other available resources. They record new information and draw a diagram of the pollinator.

Facilitation:

- What are you finding out?*
- Where did you find that information?*
- What new questions do you have about this pollinator?*
- How would you like to share this information?*

Ongoing Assessment:

Observe children as they work and engage them in conversation about what they notice and wonder.

- How do children approach the task of researching?
- What new information do they find?
- How do children record information?
- How do they generate questions?

## Writing and Storytelling



### Pollination Puppet Plays and Pollinator Poetry

Content Objective:

I can draw on information about pollination to develop a story using puppets.

I can draw on information about pollinators to write a poem.

Process:

Children use the puppets they and their classmates create in the Art Studio to perform pollination plays.

Inspired by the “Wasp Poem” and referring to unit texts, children write poems about pollinators they choose.

Facilitation:

- What is your story about?*
- Who are the characters?*
- What do you hope your audience enjoys and learns from your puppet play?*
- What is your poem about?*
- Why did you choose this pollinator to write about?*
- What do you hope your audience enjoys and learns from your poem?*
- What feeling are you trying to communicate?*

	<p><u>Ongoing Assessment:</u>          Consider ways children use information from Text Talks, discussions, and Science Lessons in their stories and poems. Notice how they use language and precise vocabulary related to the topic of pollination and to provide descriptions.</p>
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<p><b>Standards</b></p>	<p>Some standards addressed will depend on the studios in which children work. Some possibilities include work towards those listed in the Studios Introduction (Part 1) and the following studio-specific standards.</p> <p><u>Building:</u>  <b>2-LSS2-3(MA).</b> Develop and use models to compare how plants and animals depend on their surroundings and other living things to meet their needs in the places they live.</p> <p><u>Discovery:</u>  <b>W.3</b> Routinely produce a variety of clear and coherent writing in which the development, organization, and style are appropriate to task, audience, and purpose.</p> <p><u>Math:</u>  <b>QR.C.5</b> Understand place value. <a href="#">2.NBT.A.2</a></p> <p><u>Research:</u>  <b>W.1.2.a</b> Investigate questions by participating in shared research and writing projects.  <b>W.1.2.b</b> Gather information from provided sources and/or recall information from experiences in order to answer questions.  <b>W.3</b> Routinely produce a variety of clear and coherent writing in which the development, organization, and style are appropriate to task, audience, and purpose.  <b>SL.2.2.a</b> Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p><u>Writing and Storytelling:</u>  <b>SL.3.2.a</b> Describe people, places, and things, tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.</p>
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