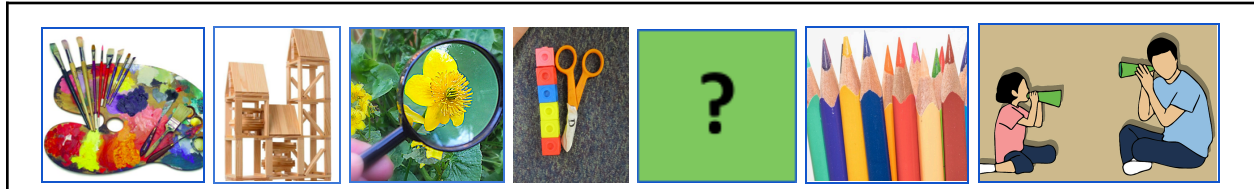


Unit 4: The Power of Pollinators

WEEK 3 Studios



**Exploring Pollinators and Pollination**

Children engage in multimedia storytelling about pollination. They consider the needs of bees in designing and constructing beehives. They interact with a familiar text to improve upon it.

<p><b>Big Ideas</b></p>	<p>Organisms in an ecosystem are interdependent.          Pollination is a result of animal behavior.          The parts of an organism have specific functions.</p>
<p><b>Guiding Questions</b></p>	<p>What do bees need to survive?</p>
<p><b>Materials and Preparation</b></p>	<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> <ul style="list-style-type: none"> <li>● Making Shadow Puppets procedure, 2-4 copies in sleeve protectors</li> <li>● black cover stock paper, some cut into halves and some into quarters</li> <li>● scrap paper</li> <li>● white and/or graphite pencils</li> <li>● scissors</li> <li>● glue sticks</li> <li>● wooden coffee stirrers, enough for 1 or 2 per puppet</li> <li>● tape</li> <li>● paper fasteners, optional, for more complicated puppets</li> <li>● <i>Cuckoo</i>, Lois Ehlert</li> </ul> <p><u>Optional for the Art and/or Building Studio:</u>          Make a puppet theatre to use in the Writing and Storytelling Studio.</p> <ul style="list-style-type: none"> <li>● cardboard box</li> </ul>

- large white paper
- tape
- lamp or flashlight

Make the theatre according to any of these simple directions:

- [Kidspot shadow puppet theatre](http://www.kidspot.com.au/things-to-do/activity-articles/make-a-shadow-puppet-theatre/news-story/d9ed634b2e68cae28c52c263771a400)  
(<http://www.kidspot.com.au/things-to-do/activity-articles/make-a-shadow-puppet-theatre/news-story/d9ed634b2e68cae28c52c263771a400>)
- [How To - Kenneth Wingard's DIY Shadow Puppet Theater](https://www.youtube.com/watch?v=BHw-4UOcj40) (video)  
(<https://www.youtube.com/watch?v=BHw-4UOcj40>)
- [PLAY | Shadow Puppets \(Using A Cardboard Box!\)](https://www.youtube.com/watch?v=eBwLs2IyWgU)  
(video) (<https://www.youtube.com/watch?v=eBwLs2IyWgU>)

New for the Building Studio:

- Kapla blocks
- Beautiful Stuff
- Beehives From Around the World images

For the Discovery Studio:

- Science and Engineering packets
- pencils and colored pencils
- erasers
- magnifiers
- Roots Images cards
- Talking about Roots conversation prompts

New for the Math Studio:

- number cubes  
Each partnerships needs 3 number cubes.
- [Target Numbers](#) recording sheet

New for the Research Studio:

- technology for listening to audio
- ["Flight of the Bumblebee."](https://www.youtube.com/watch?v=aYAJopwEYv8) Nikolai Rimsky-Korsakov  
(<https://www.youtube.com/watch?v=aYAJopwEYv8>), slide or recording, from Text Talk Day 1
- Fact Box templates, cut in quarters
- writing and drawing tools

New for the Writing & Storytelling Studio:

- Storytelling Books
- shadow puppets from Art Studio
- shadow puppet theatre

	<p>Make the puppet theatre ahead or have children follow directions to create the theatre.</p> <p>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 (Shadow Puppets) may take 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 several new activities in studios this week.</i></p> <p><i>The Art and Writing and Storytelling Studios are connected: In the Art Studio, we'll be making puppets, as we did earlier in the year. This time, though, we're making shadow puppets.</i></p> <p>Explain what a shadow puppet is, and model and/or run through the procedure, as will be most helpful to the children.</p> <p><i>The puppets you make can be ones you would use to tell a story or make a play about pollination. And you can write, tell, and show that story in the Writing and Storytelling Studio.</i></p> <p>Show the puppet theatre or explain that the children will make it.</p> <p><i>It will be amazing to see your stories come to life this way!</i></p> <p><i>People keep bees in different kinds of hives all around the world. Here are some images. You can try to build models of beehives with Kapla blocks and Beautiful Stuff. As you do, think about what the important features of beehives might be, and what materials you'd build a beehive out of in real life.</i></p> <p><i>In the Discovery Studio you'll continue your careful observations and observational drawings.</i></p> <p><i>You can also keep thinking about the roots of plants. Here are some cards for you to look at and compare, along with some questions for you to think and talk about.</i></p> <p><i>You might do two different things in the Research Studio: You can listen again to the music "Flight of the Bumblebee" and draw what you hear and imagine as you listen. The colored pencils are available for this.</i></p>

*You can also look again at the book Flight of the Honey Bee and imagine being a coauthor: If you were to add an informational fact box to this book, what fact would you write? What information would you include from what we are learning about bees and pollination? On which page of the non-fiction narrative would you place this informational fact box?*

*Write your fact box and leave it right in the book on the page where you think it would belong.*

Demonstrate inserting a fact box sheet into the book, nestling it into the binding so it doesn't fall out easily.


*Where will you begin your Studios work this week? Let's take a moment to plan carefully.*


**Facilitation**

Circulate through studios and check in with children about what they are pursuing. Refer to the Weekly Question and to studio-specific prompts and resources.

Direct children's attention to each other's work. Encourage them to ask each other for help and collaboration.

Identify a piece of work for use during Thinking and Feedback and/or for planning purposes.

<p style="text-align: center;"><b>Art</b></p> 	<p><b>Making Shadow Puppets for Pollination Plays</b>  <b>Possibly also: Making a Shadow Puppet Theatre</b></p> <p><u>Content Objective:</u>  I can follow a procedure to make a puppet that represents an important part of the pollination process.</p> <p><u>Process:</u>  The silhouette illustrations in <i>Cuckoo</i> can be a helpful resource as children think about the shapes that will make effective puppets.</p> <p>Children decide on "characters"—animal, plant, or person—or other elements that might feature in a story about pollination. They follow the Shadow Puppet Procedure to create their puppets with provided materials. They support each other with deciding on what puppets to make, and through the process of drawing, cutting, and assembling puppets. As they work, children may begin to conceptualize the stories these puppets will inhabit.</p>
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	<p><u>Facilitation:</u> Offer material and conceptual help as children work, and refer them to each other for support and collaboration. Encourage children to use precise vocabulary and to talk about the process of pollination as they understand it so far.</p> <p><i>Why is this puppet an important part of a pollination story? What other “characters” would be needed along with this one? Do you have a story in mind for these puppets to play out? Where are you getting your ideas for this puppet?</i></p> <p><u>Ongoing Assessment:</u> Listen to the vocabulary children use to describe the parts of their puppets and the process of pollination. Take note of any misconceptions or questions children express. Notice how children follow the procedure and use the resources available to them.</p>
<p><b>Building</b></p> 	<p><b>Building Beehives from Around the World</b> <b>Possibly also: Making a Shadow Puppet Theatre</b></p> <p><u>Content Objective:</u> I can refer to images to build different kinds of structures for pollinating bees and to think about how those structures help bees survive.</p> <p><u>Process:</u> Children look at images of beehive designs from around the world and build models of those, or build their own designs.</p> <p><u>Facilitation:</u> <i>Why do you think this beehive includes this feature? What do you understand about bees by looking closely at the places they might live? What do all of these beehive designs have in common? If you were building this beehive in real life, what materials do you think would work best? Why?</i></p> <p><u>Ongoing Assessment:</u> Notice whether children are making connections between earlier conversations about materials and their properties and this experience.</p> <p>What do children understand about how bees survive in relation to the designs of beehives?</p>
<p><b>Discovery</b></p>	<p><b>Ongoing Observations and Observational Recordings of Plants</b> <b>Talking about Roots</b></p>



**Content Objective:**

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

**Process:**

In addition to continuing their observational recording of plants, children look at images of roots and consider related questions. They might sort images into categories according to their observations.

**Facilitation:**

Encourage children to use the conversation prompts provided. Support them with descriptive and precise language.

**Ongoing Assessment:**

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

What descriptive language and vocabulary do children use?

What connections do they make between what they see happening and what they understand about growing conditions?

Do children look at all parts of the seeds and plants?

What is the quality of their drawings?

Do they record all relevant information with each entry?

**Math**



**Target Numbers**

**Objective:**


I can make decisions about what numbers to create and subtract from 1000 to end up with the lowest end difference.

**Process/Directions:**


- Children play in partnerships.
- Partner A starts at 1000 and rolls the three number cubes.
- Partner A picks one number to represent the hundreds, one number to represent the tens, and one number to represent the ones. Subtract this number from 1000. Write an equation to represent the difference.
- Partners take turns for 6 rounds. In 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.

**Facilitation:**

*What math strategies are helpful in this game?*

	<p><i>How are you making decisions about which number goes in the hundreds/tens/ones place?</i></p> <p><i>What is your plan for your next move?</i></p>
<p><b>Research</b></p> 	<p><b>Drawing “Flight of the Bumblebee”</b></p> <p><u>Content Objective:</u> I can respond to a piece of music through drawing.</p> <p><u>Process:</u> Children listen to the music and draw what they feel and imagine in response. The technology available should enable children to work independent of an adult so that they can play the music repeatedly and pause as they desire.</p> <p><u>Facilitation:</u> <i>What do you hear?</i> <i>What does that make you think about?</i> <i>How will you represent that idea?</i> <i>Does this music give you any new questions about bees?</i></p> <p><u>Ongoing Assessment:</u> Review children’s drawings, and reflect on their observations. How do children articulate their feelings and ideas? How do they connect visual representation to their emotions?</p> <hr/> <p><b>Adding fact boxes to <i>Flight of the Honey Bee</i></b></p> <p><u>Content Objective:</u> I can add meaningful text to a published work.</p> <p><u>Process:</u> Children look through the book <i>Flight of the Honey Bee</i> and consider where they might add a fact box to enhance the text. Once they have created their fact boxes, children nestle them into the book on the pages where they think they belong.</p> <p><u>Facilitation:</u> <i>As the coauthor of this book, where would you add an informational fact box?</i> <i>What fact would you write? Why do you think that would be an important or helpful addition to the book?</i> <i>On which page would you put this fact box? How does this information connect to the narrative, or story, of Scout?</i></p> <p><u>Ongoing Assessment:</u></p>

	<p>Review children’s fact boxes.</p> <p>What kinds of information are children most excited about sharing?</p> <p>How do children connect facts to the narrative of the text?</p> <p>How do they take the perspective of a reader to identify places where a new fact box would be helpful?</p>
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<p><b>Writing and Storytelling</b></p> 	<p><b>Pollination Puppet Plays</b></p> <p><u>Content Objective:</u> I can draw on information about pollination to develop a story using puppets.</p> <p><u>Process:</u> Children use the puppets they create in the Art Studio to perform pollination plays. In the Art and/or Building Studio, children may build a puppet theatre to use for performances. Alternately, they develop ideas and write stories for which they later make puppets in the Art Studio.</p> <p><u>Facilitation:</u> <i>What is your story about?</i> <i>Who are the characters?</i> <i>What do you hope your audience enjoys and learns from your puppet play?</i></p> <p><u>Ongoing Assessment:</u> Consider ways children’s stories reflect and integrate information from Text Talks, discussions, and Science Lessons. Notice how children use language and precise vocabulary related to the topic of pollination.</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>Discovery:</u> <b>W.2.2.a</b> With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.</p> <p><u>Math:</u> <b>QR.C.6</b> Use place value understanding and properties of operations to add and subtract. <a href="#">2.NBT.B.7</a>; <a href="#">2.NBT.B.8</a></p>
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	<p><u>Research:</u> <b>W.3.2</b> Use a combination of drawing and writing to communicate a topic with a beginning, middle (including details), and an end.</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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**Notes**