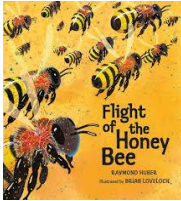
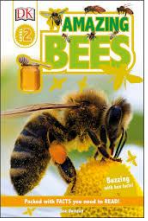

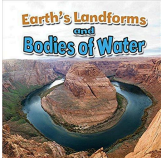
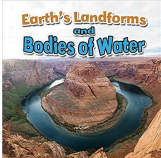



Unit 4: The Power of Pollinators

WEEK 3 At a Glance

<p>Weekly Question: What do bees need to survive?</p>			
<p>Texts</p>  	<p>Vocabulary and Language</p> <p>Days 1 & 2: Introduce Weekly Words: <i>convert, flicker, groom, marking, navigate, pluck, plunge, wear out</i></p> <p>Day 3: General Nouns</p> <p>Day 4: General Nouns</p> <p>Day 5: Making and Using New Words</p>		
<p>Mentor texts</p>    	<p>Text Talk</p> <p>Day 1: <i>Flight of the Honey Bee</i>, Read 1</p> <p>Day 2: <i>Flight of the Honey Bee</i>, Read 2</p> <p>Day 3: <i>Amazing Bees</i>, Read 1</p> <p>Day 4: <i>Amazing Bees</i>, Read 2</p> <p>Day 5: <i>Flight of the Honey Bee</i> and <i>Amazing Bees</i></p> <p>Stations</p> <p>Guided Independent Reading</p> <hr/> <p>Listening & Speaking: Listen & Respond ("Apples and Bees")</p> <p>Science Literacy: How have your seeds changed?</p> <p>Vocabulary: Choose 3!, Talk About It</p> <p>Word Work: select from activities</p> <p>Writing: continues from Text Talk Day 3</p>		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Science and Engineering</p> <p>Lesson 1: Quadrat Study 7</p> <p>Lesson 2: Observing Roots</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Studios</p> <p>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> </td> </tr> </table>	<p>Science and Engineering</p> <p>Lesson 1: Quadrat Study 7</p> <p>Lesson 2: Observing Roots</p>	<p>Studios</p> <p>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>
<p>Science and Engineering</p> <p>Lesson 1: Quadrat Study 7</p> <p>Lesson 2: Observing Roots</p>	<p>Studios</p> <p>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>		
	<p>Writing: Report</p> <p>Days 1-3: Individual Construction; Individual/Small Group/Whole Group instruction</p> <p>Day 4: Deconstruction and Individual Construction: General Statement; Individual Construction: Diagrams</p> <p>Day 5: Deconstruction and Joint Construction: Titles; Individual Construction</p>		

Unit 4: The Power of Pollinators

WEEK 3 Days 1 & 2

Vocabulary & Language
Weekly Words

Weekly Question	What do bees need to survive?
Language Objectives	I can talk with my classmates about words. (SL.1.2) I can define and use new words. (L.5) I can connect words to my own real-life experiences. (L.5.2.a)
Vocabulary	convert: to change into another form or state flick: to move with a swift and jerky motion groom (v): to make clean and neat in appearance marking: a pattern of marks or coloring on a plant or animal navigate: to find one’s way to, around, or through pluck: to pick off plunge: to push into something wear out: to use until no longer useful
Materials and Preparation	Choose four words to teach each day, following the steps of the Weekly Words routine. <ul style="list-style-type: none"> ● Week 3 Weekly Words cards ● Week 3 Weekly Words slides ● chart paper Create the week’s Weekly Words chart by writing out the Weekly Words and their definitions. Add icons, sketches, or images as needed.
Opening Day 1	<p><i>This week we are learning about what bees, an important pollinator, need to survive. Our Weekly Words are ones we can use to talk about this. Today’s words are: _____, _____, _____, and _____.</i></p> <p>As children rate their knowledge of each word, ask a few children to share their ideas about the word. Use this opportunity to highlight connections,</p>

	<p>similarities, and differences to other words used in the classroom, remarking on parts of speech and morphology and affirming children’s word knowledge.</p> <p>As children respond to the Think, Pair, Share prompts, encourage them to use the word as they speak. Offer sentence stems where it might be helpful.</p>
Day 2	<p><i>Let’s continue learning our words for this week. Today’s words are: _____, _____, _____, and _____.</i></p>
Teaching the words	<p>convert (verb) Elaboration: <i>In the process of melting, we can convert ice, a solid, into water, a liquid. How does this happen?</i></p> <p>Think, Pair, Share prompt: <i>How can we convert a liquid back into a solid?</i></p> <hr/> <p>flick (verb) Elaboration: Show pages 17-18 in Flight of the Honey Bee, or use the slide along with the Weekly Word card. <i>In Flight of the Honey Bee the bees “flick from the hive like golden pebbles.” This is figurative language, used to describe something poetically.</i> Show the illustrations on pages 17-18, and discuss what this language means.</p> <p>Think, Pair, Share prompt: <i>You can flick a crumb off the table with your fingers. Turn to your partner and pretend to flick something off their shoulder. As you do, say, “I’m flicking a _____ off your shoulder!”</i></p> <hr/> <p>groom (verb) Elaboration: <i>Monkeys are known to groom each other. It’s a way for them to keep each other clean, and also a way to connect with each other.</i></p> <p>Think, Pair, Share prompt: <i>What are some things you do to groom yourself? Is there anyone who grooms you? What do they do?</i></p> <hr/> <p>marking (noun)</p>

	<p>Elaboration: <i>Many people recognize the red breast feathers of a robin. These markings help us identify what kind of bird it is.</i></p> <p>Think, Pair, Share prompt: <i>These flowers are called Johnny Jump Ups. They are a species of flower that comes up early in the Spring. They might be planted in gardens or growing as wildflowers. Talk with your partner to describe the Johnny Jump Ups' markings.</i></p>
	<p>navigate (verb) Elaboration: <i>Each Fall, ruby throated hummingbirds migrate south, and each Spring, they migrate north again. They navigate from one place to another without using maps or GPS or asking for directions!</i></p> <p>Think, Pair, Share prompt: <i>What is one question you have about how birds or other pollinators navigate the route from one place to another?</i></p>
	<p>pluck (verb) Elaboration: <i>This person is plucking cherries right off the tree branches. Then maybe she'll put them in a basket or pop them right into her mouth!</i></p> <p>Think, Pair, Share prompt: <i>Finish this sentence: I would like to pluck some _____ right off a _____!</i></p>
	<p>plunge (verb) Elaboration: <i>A hummingbird plunges its beak into a flower. Pelicans are large birds that eat fish. To get the fish, they plunge headfirst directly into the water!</i></p> <p>Think, Pair, Share prompt: <i>Have you ever plunged your head underwater in the bathtub? How did that feel? Imagine plunging your hands into a bucket of ice water. How would that feel?</i></p>
	<p>wear out (verb) Elaboration: <i>We used an expression like this when we talked about erosion: wind</i></p>

	<p><i>and water wear away land.</i> <i>To wear out means to use something until it is no longer useful.</i> <i>Bees' wings wear out after flying for around 500 miles.</i></p> <p>Think, Pair, Share prompt: <i>What are some signs that these sneakers are worn out?</i></p>
Closing	<p><i>This week we are learning about what bees need to survive and how they act as pollinators. The words we're studying this week will help us to talk about this, our texts, and other experiences we're having together.</i></p>
Standards	<p>SL.1.2 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.</p> <p>L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings sufficient for reading, writing, speaking, and listening.</p> <p>L.5.2.a Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy).</p>
Ongoing assessment	<p>Use information gathered from each lesson to plan for embedded opportunities for teaching and reinforcing words.</p> <p>How do children interact with new and familiar words? Are they playful, curious, perplexed, disengaged? Do children connect words to personal experiences? What connections do children make between words they are learning and familiar words? How do children integrate learning from lessons and other developing morphological knowledge? How do children respond when they discover an error in their understanding or use of a word? How flexible are they when confronted with new definitions? How do children talk with peers about new words—do they use gestures, substitute familiar words, dig for descriptions, tell stories?</p> <p>Keep a list to follow each child's vocabulary growth over time.</p>



convert

verb

<https://sciencing.com/ice-cubes-melting-process-5415212.html>



flick

verb

<https://www.cranbrooktownsman.com/opinion/a-butterfly-flaps-its-wings-blows-up-a-romour/>, from Raymond Huber and Brian Lovelock, *Flight of the Honey Bee*

Weekly Words U4 W3

Focus on Second/ 2nd Grade for ME | Boston Public Schools Department of Early Childhood P-2/

Maine Department of Education



groom

verb

https://en.wikipedia.org/wiki/Social_grooming

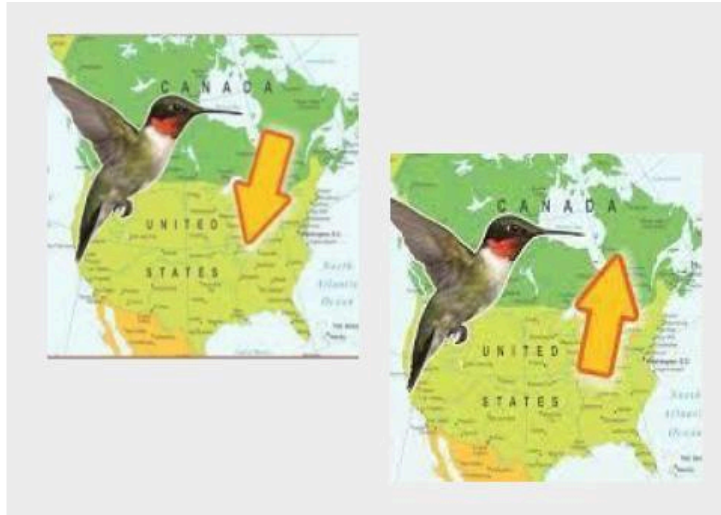


marking

noun

https://en.wikipedia.org/wiki/American_robin,
<https://www.hometownseeds.com/products/johnny-jump-ups-viola-perennial-seeds>

Weekly Words U4 W3



navigate

verb

<https://empressofdirt.net/fall-hummingbird-migration/>



pluck

verb

<https://mikelovestc.wordpress.com/tag/cherries/>

Weekly Words U4 W3

Focus on Second/ 2nd Grade for ME | Boston Public Schools Department of Early Childhood P-2/

Maine Department of Education



plunge

verb

<https://www.thoughtco.com/facts-about-pelicans-130588>



wear out

verb

<https://www.honeybeesuite.com/diaphanous-wings-they-soar/>,
<https://www.physioinpenrith.com.au/blog/worn-out-shoes-cause-back-knee-pain>

Weekly Words U4 W3

Focus on Second/ 2nd Grade for ME | Boston Public Schools Department of Early Childhood P-2/
Maine Department of Education

Weekly Words

Unit 4, Week 3

convert

verb

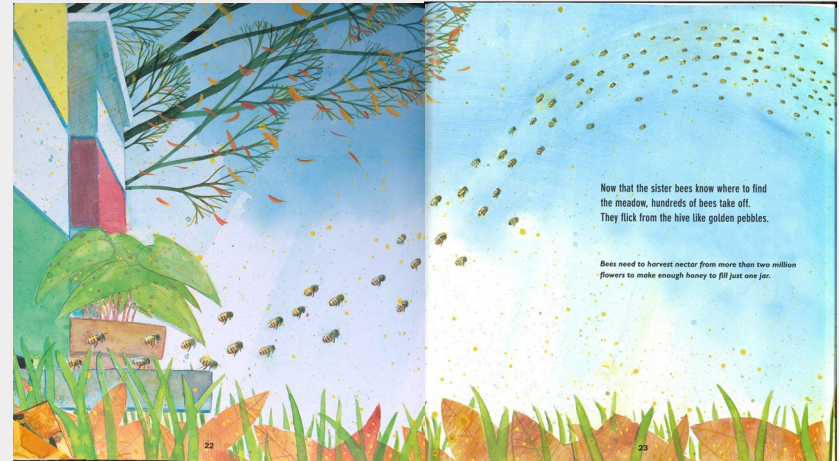
to change into another form or
state



flick

verb

to move with a swift and jerky motion



groom

verb

to make clean and neat in
appearance



marking

noun

a pattern or marks or coloring on a
plant or animal



navigate

verb

to find one's way to, around, or through



pluck

verb

to pick off



plunge

verb

to push into something



wear out

verb

to use until no longer useful



Unit 4: The Power of Pollinators

WEEK 3 Day 3

Vocabulary & Language
General Nouns

Weekly Question	What do bees need to survive?
Language Objective	I can identify general nouns. (L.1.2.a, L.1.2.b)
Vocabulary	general: naming a group; not specific noun: a word that names a person, place, thing, or idea
Materials and Preparation	<ul style="list-style-type: none"> General Nouns slides Note: This lesson uses slides 1-7.
Opening	<i>Last week in Writing we reviewed general nouns. In Language this week we will continue to identify and use general nouns.</i>
Discussion slide 2	<p><i>Remember, when authors write reports about a whole group of things, they use general nouns.</i></p> <p><i>For example, this book is about groups of animal pollinators, not just one particular animal pollinator.</i></p> <p><i>Jennifer Boothroyd uses the general noun “animal pollinators” to talk about groups of animal pollinators. It is plural. The -s at the end makes it a general noun.</i></p>
slide 3	<p><i>“Lizards” and “doves” are both general nouns.</i></p> <p><i>These sentences give information about all lizards and doves.</i></p>
slide 4	<p><i>Let’s look closely at the caption. It reads, “Pollen sticks to this lizard’s scales.”</i></p> <p><i>The caption does not use a general noun. It gives information about that lizard in particular, not all lizards.</i></p>
slide 5	<i>Let’s look at another example. These captions are from What is</i>

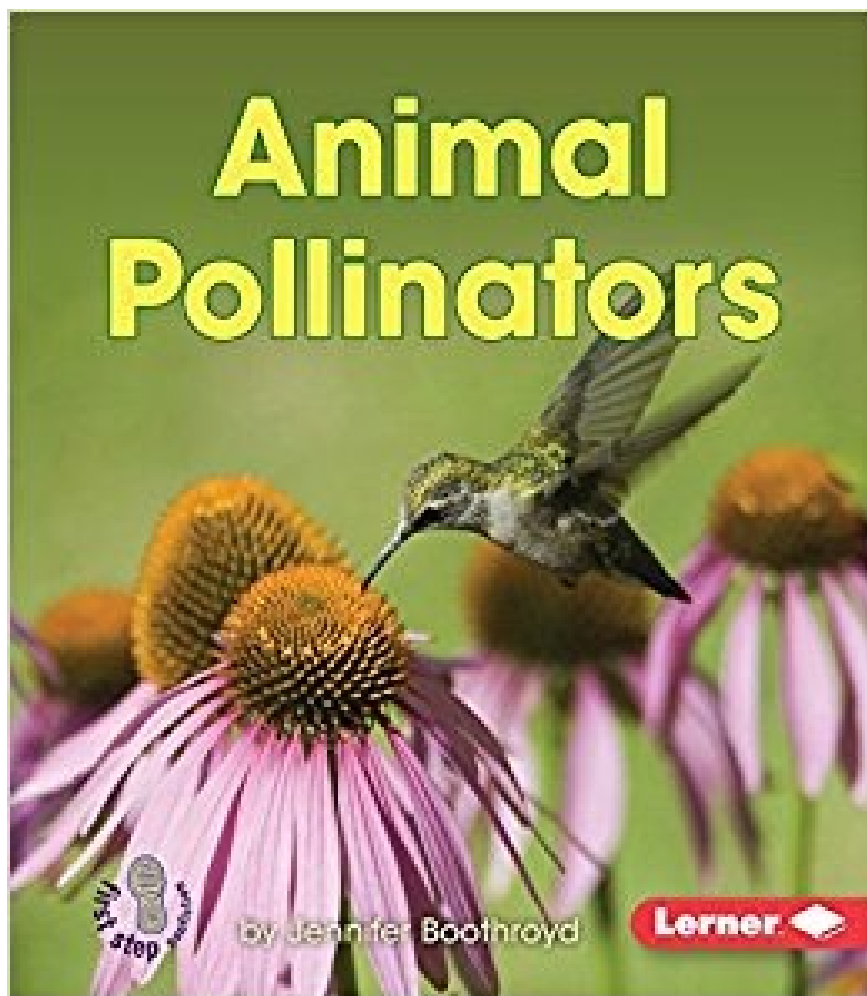
	<p>Pollination? <i>Which sentence has a general noun? How do you know?</i></p>
slide 6	<p><i>Is this what you found?</i> <i>This sentence gives information about all orchids.</i></p>
slide 7	<p><i>This sentence does not have general nouns, because it gives information about the specific butterfly and orchid in that photograph.</i></p>
Closing	<p><i>Today you reviewed when authors use and don't use general nouns. Tomorrow you will write your own sentences.</i></p>
Standards	<p>L.1.2.a Use collective nouns (e.g., group). L.1.2.b Form and use frequently occurring irregular plural nouns (e.g., feet, children, teeth, mice, fish).</p>
Ongoing assessment	<p>Reflect on the lesson. Do children accurately identify the general nouns? What are their confusions?</p>

Notes

General Nouns

Vocabulary & Language Week 3, Days 3-4

Animal Pollinators



by Jennifer Boothroyd

Lerner



Pollen sticks to this lizard's scales.

Some small **lizards** pollinate flowers.



Pollen sticks to the dove's feathers.

Doves pollinate flowers.

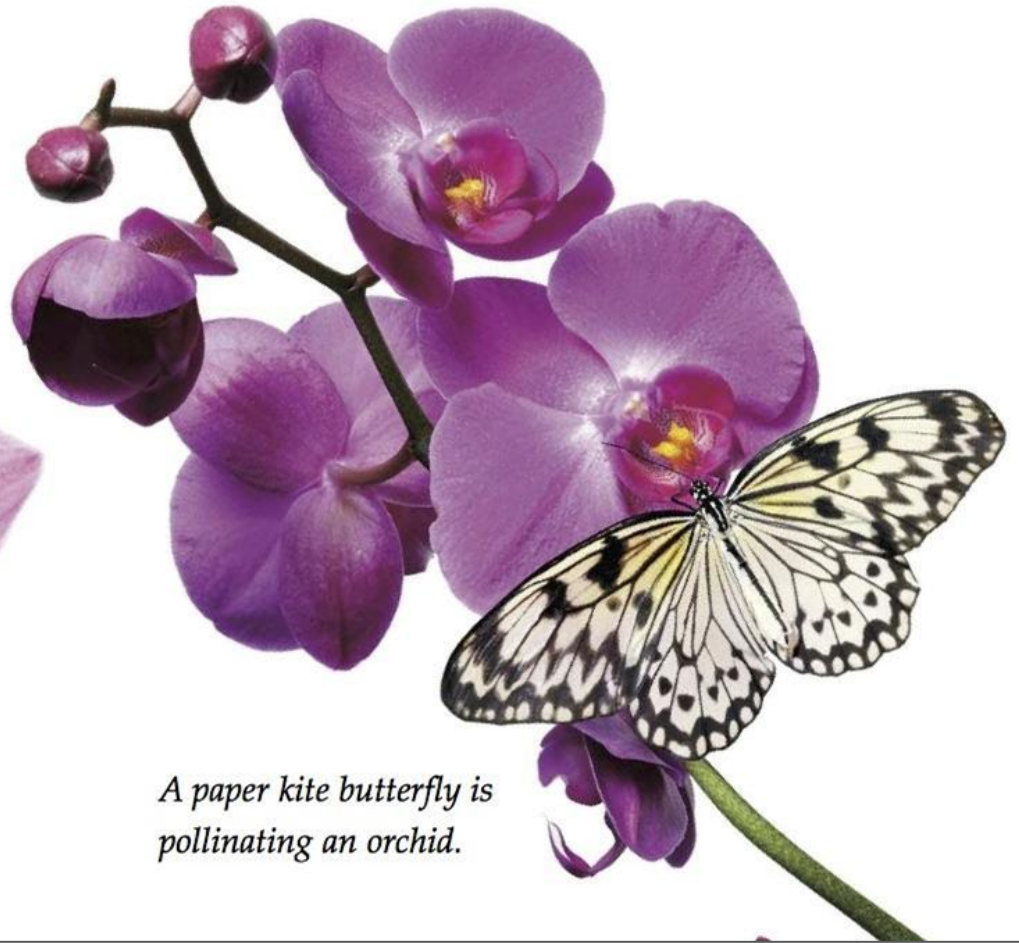
Pollen sticks to
this **lizard's** scales.



Pollen sticks to
this lizard's scales.

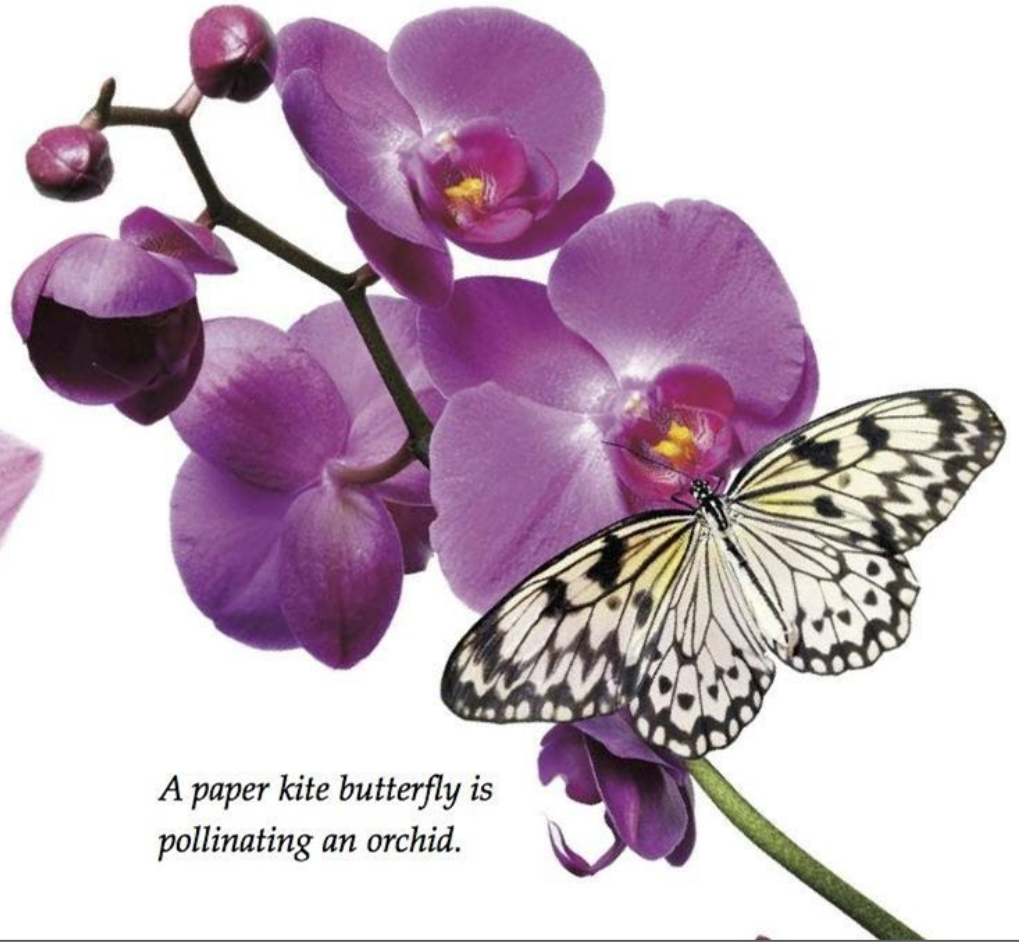
Some small **lizards** pollinate
flowers.

*Orchids have special markings
that guide insects to their nectar.*



*A paper kite butterfly is
pollinating an orchid.*

*Orchids have special markings
that guide insects to their nectar.*



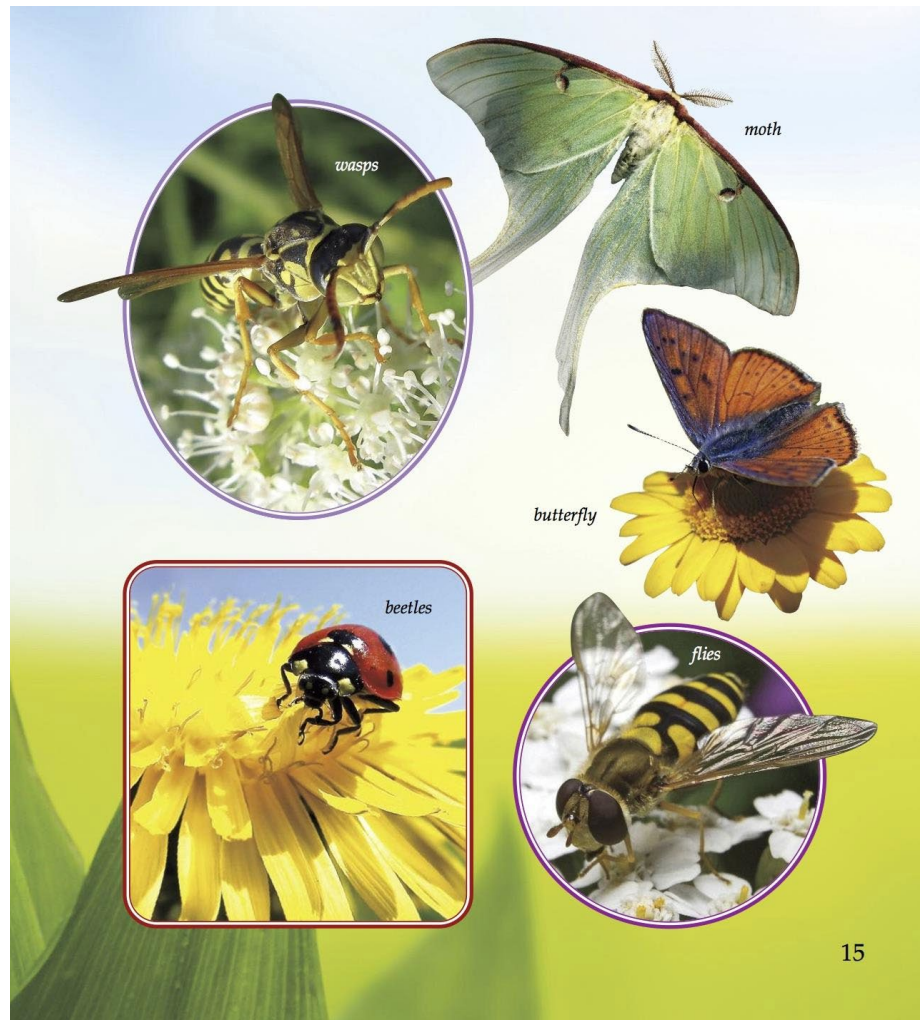
*A paper kite butterfly is
pollinating an orchid.*

Orchids have special markings that guide insects to their nectar.



A paper kite butterfly is pollinating an orchid.

1. Look at the image from *What is Pollination?*
2. Choose one insect pollinator to write about.
3. Write one sentence that uses a **general noun** to give information about *all* of that insect pollinator.
4. Write another sentence that gives information about that *particular* insect pollinator in the photograph.



Unit 4: The Power of Pollinators

WEEK 3 Day 4

Vocabulary & Language
General Nouns

Weekly Question	What do bees need to survive?
Language Objective	I can use general nouns. (L.2.1.a, L.2.1.b)
Vocabulary	general: naming a group; not specific noun: a word that names a person, place, thing, or idea
Materials and Preparation	<ul style="list-style-type: none">• General Nouns slides Note: This lesson uses slide 8.• paper and pencil, one for each child
Opening	<i>Yesterday you reviewed general nouns. We discussed how authors use general nouns to write about all of something and don't use them to write about something specific.</i>
Discussion	Read the instructions on the slide. Review slides 1-7 as needed. Send children to write their sentences.
slide 8	Bring the class back together. Invite a child to share their sentences. Ask the child to identify the general noun in the first sentence and the specific noun in the second sentence. Repeat the process with another child, as time allows.
Closing	<i>Today you wrote sentences to practice the difference between general and specific nouns.</i>
Standards	L.1.2.a Use collective nouns (e.g., group). L.1.2.b Form and use frequently occurring irregular plural nouns (e.g., feet, children, teeth, mice, fish).

Ongoing assessment	Review children's sentences. Do children use general nouns to give information that is true about <i>all</i> of the chosen insect pollinators? Do they accurately form the general nouns? Do children use singular nouns to give information about the <i>specific</i> insect pollinator in the photograph? What information do children provide about insect pollinators?
---------------------------	--

Notes

Unit 4: The Power of Pollinators

WEEK 3 Day 5

Vocabulary & Language
Making and Using New Words

Weekly Question	What do bees need to survive?
Language Objective	I can work with my classmates to make new words by identifying root words and changing or adding parts. I can use the words we make in a sentence. (SL.1.2, L.4.2.c)
Vocabulary	convert: to change into another form or state flick: to move with a swift and jerky motion groom (v): to make clean and neat in appearance marking: a pattern of marks or coloring on a plant or animal navigate: to find one’s way to, around, or through pluck: to pick off plunge: to push into something wear out: to use until no longer useful
Materials and Preparation	<ul style="list-style-type: none">• Week 3 Making and Using New Words sheets, one for each small group• pencils, one or two for each small group• Week 3 Weekly Words cards• chart paper and markers (2 different colors)
Opening	<p><i>This week we are using the Making and Using New Words routine, using both suffixes and prefixes.</i></p> <p>Recall that suffixes change the end of a word, and prefixes change the beginning of a word.</p>
Key Activity	Facilitate the Making and Using New Words routine, as established in odd weeks since Unit 1.
Closing	<p><i>We can see that changing a word’s ending changes its meaning and how it’s used.</i></p>

<p>Standards</p>	<p>SL.1.2 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.</p> <p>L.4.2.c Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., addition, additional).</p>
<p>Ongoing assessment</p>	<p>Listen to children’s conversations as they work.</p> <p>What knowledge do children demonstrate about parts of words? What contributions do they make to the construction of a response to a specific question?</p> <p>Observe children’s interactions.</p> <p>How effectively do children work in their groups? What roles do they take on?</p> <p>Reflect on the whole group sharing of one group’s response.</p> <p>What more was revealed about children’s understanding of how words’ meanings change according to their parts?</p> <p>Review each sheet. Use children’s answers to inform planning for successive lessons, revisiting words, prefixes, and suffixes, and informal conversations with individual children.</p>

Notes

Names: _____

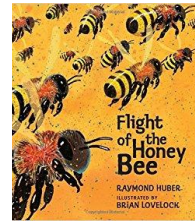
Choose one Weekly Word. Underline the base word. Make new words by adding or changing prefixes or suffixes. Write the words. Check to make sure they make sense. What do the new words mean?

Weekly Words	Prefixes	Suffixes		New Words
convert flick groom marking navigate pluck plunge wear out	un - re - mis - dis - trans - non -	- s - ed - ing - es - er - est	- ful - ment - ness - less	 <hr/> <hr/> <hr/> <hr/>

Write a sentence with one of the new words.

Unit 4: The Power of Pollinators

WEEK 3 Day 1



Text Talk
Flight of the Honey Bee
 Read 1 of 2

Big Ideas	<p>Organisms in an ecosystem are interdependent.</p> <p>Living things grow and change over time.</p> <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>
Weekly Question	What do bees need to survive?
Content Objectives	<p>I can describe the sequence of events in the honey bee’s journey. (R.4.2, R.6.2.b)</p> <p>I can explain how images in the book clarify the text. (R.11.2.c, R.11.2.d)</p>
Language Objective	I can use words and phrases that I am learning during our group conversations. (L.6.2.a)
Vocabulary	<p>buffet: to push hard against</p> <p>captivated: fascinated, enthralled (held “captive” with interest)</p> <p>cloak: to cover</p> <p>gather: to come or bring together in a group</p> <p>hive: a shelter for bees</p> <p>humming: full of busy activity</p> <p>lustrous: shining</p> <p>miniature: a tiny version of something bigger</p> <p>pollinator: animal that moves pollen from one flower to another</p> <p>produce: to make, to bring forth</p> <p>rapids: air with a very swiftly flowing current (text-specific)</p>

	<p>ruffle: to disturb the smoothness of something</p> <p>scout: someone sent out to get information</p> <p>sprinkle: to scatter (powder)</p> <p>swift: fast</p> <p>tangled: twisted together into a knot</p> <p>transformed: completely changed</p> <p>wax comb: the cells bees construct with wax they produce where they live and store honey (honey comb)</p>
<p>Materials and Preparation</p>	<ul style="list-style-type: none"> ● <i>Flight of the Honey Bee</i>, Raymond Huber, 2 copies Note: For this lesson, plan to read the introduction and the narrative but not the informational fact boxes. ● <i>Flight of the Honey Bee</i> Sequencing sheet, one copy for each pair of children ● "Flight of the Bumblebee", Nikolai Rimsky-Korsakov (https://www.youtube.com/watch?v=aYAJopwEYv8), slide or recording ● technology to play music Note: During this lesson, play the music as background while the children are working, as a transition from the rug to desks, or in some other fashion that will add to, not detract from, children's experience of the book. There is no need to show the slide. Children will interact with this music in the Research Studio. ● chart paper and marker Prepare the Weekly Question Chart. Place it in the whole group meeting area.
<p>Opening 2 minutes</p>	<p>Introduce the book, and set the purpose for reading.</p> <p><i>We have been learning about pollination, and by now we know that one of the most important pollinators is the honey bee. The book we will read today is titled Flight of the Honey Bee, written by Raymond Huber and illustrated by Brian Lovelock. This book is a work of narrative nonfiction. This means it has true information and is told like a story. In this story, the author has chosen to create a character of the honey bee, calling her Scout, named after the honey bees that seek information for the rest of the hive.</i></p> <p><i>On each page, there are narrative sections (the story), illustrations, and fact boxes. The fact boxes are not actually in boxes, but we will use that term; they are written in smaller type. [Open a page to point out a fact box.] We'll read those next time.</i></p> <p><i>Today, we will read the story to get the gist of the book, so we can describe the honey bee scout's sequence of actions. We will also</i></p>

	<i>look closely to see how the illustrations support that sequence.</i>
Text and Discussion 15 minutes	Read the text introduction. Activate background knowledge. <i>What do we already know about bees and pollination from our study so far?</i>
page 10	Read the narrative, pausing briefly to act out or define tricky vocabulary words, such as “spiral.” Read through the end of page 10 (“... an ocean of flowers.”) <i>What is Scout’s important task? What actions has she taken so far towards that task?</i>
page 16	Read through page 16. Think, Pair, Share. <i>What are some of the things so far that might have prevented Scout from doing her important task of finding pollen and nectar and bringing it back to her hive?</i> <i>How do the illustrations show that Scout is in danger?</i>
page 20	Read through page 20. Think, Pair, Share to consider three questions: <i>From the text and illustrations, what is Scout’s dance?</i> <i>Why do you think she is dancing for the other bees?</i> <i>What does it mean that Scout “spins a story”?</i>
page 29	Read through the end of the narrative. Pause to act out or define tricky words such as “transformed.”
Key Activity 20 minutes	<i>Now that we have read the whole story, let’s put the main events in order. We can use this sheet to show the sequence of events in the honey bee’s journey.</i> Distribute the Sequencing sheets to pairs of children. <i>First let’s practice by coming up with two events together.</i> Harvest children’s ideas as a group. <i>Now, you and your partner will choose five events that you think are the most important. You might or might not include the events we just discussed.</i> <i>Use both the text and your memory of the illustrations to help you as you record the events you identify.</i> Send children to work. Play “Flight of the Bumblebee” during this transition or while children work. Children may reference the two copies of the text to support their work. Gather as a group.

	<p>Invite a few pairs of children to share their work.</p> <p>Facilitate a short discussion to connect experiences. <i>How do you think listening to the music influenced your work?</i></p> <p>Acknowledge connections to Unit 1 and children’s knowledge of themselves as learners. The audio may have been inspiring for some children and distracting for others.</p>
<p>Writing Station 2 minutes</p>	<p>Introduce the Writing Station. <i>This week at the Writing Station, you will continue adding to your sequencing pages, adding additional details we discussed as a group, if they are needed.</i></p> <p>Clarify children’s questions about the task.</p>
<p>Closing 1 minute</p>	<p><i>Today we read to learn the sequence of events in a honey bee’s journey to find nectar and pollen and bring them back to the hive. We also paid close attention to the illustrations to see how they supported our learning.</i></p>
<p>Weekly Question Chart 2 minutes</p>	<p>Introduce the Weekly Question Chart. <i>Throughout this week, we will be asking and answering this question: What do bees need to survive? Today, we thought about the long journey that honey bees take to find and bring pollen and nectar back to the hive. Let’s add this to our chart.</i></p>
<p>Standards</p>	<p>R.4.2 Ask and answer questions about who, what, when, where, how, and why.</p> <p>R.6.2.b Describe the relationship between a series of events, ideas, or concepts, using language that pertains to time, sequence, and cause/effect.</p> <p>R.11.2.c Explain how specific visuals contribute to and clarify the meaning of a text.</p> <p>R.11.2.d Compare and contrast the information presented by two texts on the same topic.</p> <p>L.6.2.a Use words and phrases acquired through conversations, reading, and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., When other kids are happy, that makes me happy).</p>
<p>Ongoing assessment</p>	<p>Listen to group conversations.</p> <p>What steps of the honey bee’s journey do children name? What information do children glean from illustrations? What vocabulary do children employ in their discussions?</p> <p>Review (and copy) the children’s sequencing sheets.</p> <p>What understandings and confusion do they reveal?</p>

Flight of the Bumblebee

Text Talk Week 3 Day 1



Names: _____ Date: _____

Flight of the Honey Bee Sequencing

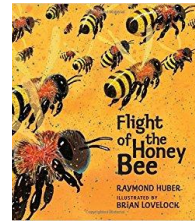
First	
Next	
Then	
So	
Finally	

Talk and write with your partner:

How did the illustrations work together with the text to help you sequence the story?

Unit 4: The Power of Pollinators

WEEK 3 Day 2



Text Talk
Flight of the Honey Bee
 Read 2 of 3

Big Ideas	<p>Organisms in an ecosystem are interdependent.</p> <p>Living things grow and change over time.</p> <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>
Weekly Question	What do bees need to survive?
Content Objective	I can describe and explain the author’s purpose in writing the text in narrative form with additional information. (R.9.2.b, LSS2-3(MA))
Language / SEL Objective	I can talk about nonfiction narrative and informational text by linking my comments to those of my classmates. (SL.1.2.b, Relationship Skills)
Vocabulary	<p>buffet: to push hard against</p> <p>captivated: fascinated, enthralled (held “captive” with interest)</p> <p>cloak: to cover</p> <p>gather: to come or bring together in a group</p> <p>hive: a shelter for bees</p> <p>hum: full of busy activity</p> <p>lustrous: shining</p> <p>miniature: a tiny version of something bigger</p> <p>pollinator: animal that moves pollen from one flower to another</p> <p>produce: to make, to bring forth</p> <p>rapids: air with a very swiftly flowing current (text-specific)</p>

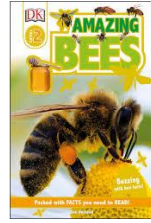
	<p>ruffle: to disturb the smoothness of something</p> <p>scout: someone sent out to get information</p> <p>sprinkle: to scatter (powder)</p> <p>swift: fast</p> <p>tangled: twisted together into a knot</p> <p>transformed: completely changed</p> <p>wax comb: the cells bees construct with wax they produce where they live and store honey (honey comb)</p>
<p>Materials and Preparation</p>	<ul style="list-style-type: none"> ● <i>Flight of the Honey Bee</i>, Raymond Huber ● Text Talk notebooks ● writing tools <p>On the whiteboard or chart paper, write the following questions.</p> <p>What does the fact box tell us here?</p> <p>How is it the same or different from what the narrative says?</p> <p>What kind of language is used in the narrative, compared to the language used in the fact box?</p> <p>How do both elements of the page help us learn about pollination?</p> <p>Why might Raymond Huber have chosen to have both kinds of text on one page?</p> <p>Elsewhere on the board write:</p> <p>From what we have learned so far, why do you think Raymond Huber wrote this book as a narrative with informational fact boxes?</p>
<p>Opening 1 minute</p>	<p>Reintroduce the book, and set the purpose for reading.</p> <p><i>Today we will read Flight of the Honey Bee by Raymond Huber again. This time we'll pay special attention to the fact boxes that give us information about honey bees. We will also ask ourselves: why did Raymond Huber write the book this way—as narrative nonfiction plus informational text?</i></p>
<p>Text and Discussion 22 minutes page 9</p>	<p>Jump to page 9. Read the narrative and the fact box (“Bees navigate using sunlight...”).</p> <p>Refer to the questions on the board. Think, Pair, Share with two different partners.</p> <p><i>What does the fact box tell us here?</i></p> <p><i>How is it the same or different from what the narrative says?</i></p>

	<p><i>Turn to a different partner.</i></p> <p><i>What kind of language is used in the narrative [e.g., figurative language], compared to the language used in the fact box?</i></p> <p><i>How do both elements of the page help us learn about pollination?</i></p> <p><i>Why might Raymond Huber have chosen to have both kinds of text on one page?</i></p> <p>After children talk with partners, discuss as a group.</p>
page 14	<p><i>Let's skip to another page that helps us think about pollination.</i></p> <p>Jump to page 14. Read the narrative and fact box ("Bees are charged with..."). Refer to and briefly discuss the questions on the board.</p>
page 20	<p>Jump to page 20. Read the narrative and fact box, ("The bees' dance..."). Think, Triad, Share, using the first two questions on the board.</p> <p><i>What does the fact box tell us here?</i></p> <p><i>How is it the same or different from what the narrative says?</i></p> <p>After children talk in trios, facilitate a whole group discussion.</p> <p><i>What kind of language is used in the narrative, compared to language used in the fact box?</i></p> <p><i>Why might Raymond Huber have chosen to have both kinds of text on one page?</i></p>
page 23	<p>Jump to page 23. Read the narrative and text box ("Bees need to harvest...").</p> <p>Model thinking.</p> <p><i>Wow! Did you know this about honey? It's amazing that so many flowers are needed to make one jar of honey. This affects me, as someone who eats honey. This will make me think differently about honey and about the importance of bees pollinating many flowers. If Raymond Huber had not included this fact box, we would not have learned this information, because it's not included in the narrative.</i></p>
Key Activity 16 minutes	<p><i>Let's take a Note Break to think about this question: From what we have learned so far, why do you think Raymond Huber wrote this book as a narrative with informational fact boxes?</i></p> <p>After the Note Break, collect the notebooks. Invite children to share the ideas they recorded, and discuss any patterns in their thinking.</p>

	<p>Conclude by thinking beyond the text as a whole group.</p> <p><i>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?</i></p> <p>Note that children will have an opportunity to add fact boxes (on sticky notes) to this text at the Research Studio.</p>
<p>Closing 1 minute</p>	<p><i>Today we zoomed in on a few pages in Flight of the Honey Bee to think about how the author communicates through informational text and narrative and what we can learn about honey bees from reading the narrative sections and the informational fact boxes together.</i></p>
<p>Standards</p>	<p>R.9.2.b Identify the main purpose of a text, including what the author wants to answer, explain, or describe.</p> <p>SL.1.2.b Build on others' talk in conversations by linking their comments to the remarks of others.</p> <p>2-LSS2-3(MA). 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. Clarification Statement: • Animals need food, water, air, shelter, and favorable temperature; plants need sufficient light, water, minerals, favorable temperature, and animals or other mechanisms to disperse seeds.</p> <p>SEL. Relationship Skills.</p>
<p>Ongoing assessment</p>	<p>Review children’s Text Talk notebooks.</p> <p>Listen in to group conversation about the relationship between the fact boxes and the narrative and the purpose of including these two kinds of writing in the book.</p>

Notes

Unit 4: The Power of Pollinators



WEEK 3 Day 3

Text Talk
Amazing Bees
 Read 1 of 2

Big Ideas	The parts of an organism have specific functions. Pollination is a result of animal behavior. Animals, including humans, benefit from and depend on pollination.
Weekly Question	What do bees need to survive?
Content Objective	I can use text features to help explain information bee’s structures help them function and survive. (R.8.2.b, R.11.2.c, R.11.2.d, LSS2-3(MA)).
Language / SEL Objective	I can take turns respectfully and follow our class norms for discussion. (SL.1.2.a, Social Awareness, Relationship Skills)
Vocabulary	<p>crops: plants grown on a farm</p> <p>dip: to plunge into</p> <p>feature: a part or quality of something</p> <p>form: physical structure of shape</p> <p>function: the purpose or role of something</p> <p>honeybee: a bee that collects and stores honey</p> <p>honeycomb: the cells bees construct with wax they produce where they live and store honey (wax comb)</p> <p>insect: small creature with six legs, two sets of wings, and a body divided into three parts</p> <p>* marking: a pattern of marks or coloring on a plant or animal</p> <p>nectar: sweet liquid found in flowers</p> <p>petal: the colored pieces of the flower that surround the stamen and stigma</p> <p>pollen: powder in the middle of most flowers</p>

	<p>powdery: dusted or sprinkled (such as with pollen) signpost: obvious clue uncurl: to straighten out waggle: short, quick movement up and down or side to side</p>				
<p>Materials and Preparation</p>	<ul style="list-style-type: none"> • <i>Amazing Bees</i>, Sue Unstead • Informational Text Features chart • chart paper <p>Prepare the following Structure and Function chart.</p> <table border="1" data-bbox="550 606 1300 955"> <thead> <tr> <th data-bbox="550 606 927 674">Structure</th> <th data-bbox="927 606 1300 674">Function</th> </tr> </thead> <tbody> <tr> <td data-bbox="550 674 927 955"></td> <td data-bbox="927 674 1300 955"></td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Weekly Word card, “marking” • Writing Station Response: <i>Amazing Bees</i>, 1 copy <p>On the whiteboard, write the Writing Station prompt.</p>	Structure	Function		
Structure	Function				
<p>Opening 1 minute</p>	<p>Introduce the book and purpose for reading. <i>Today we will read Amazing Bees by Sue Unstead. We will use the text features of the book to help us understand more about bees and pollination. In particular, we will think about the physical features or structures of bees’ bodies and how these features function for the bee to survive.</i></p>				
<p>Text and Discussion 30 minutes</p>	<p>Open to the table of contents and refer to the Informational Text Features chart. <i>Today we are going to read the introduction and Chapters 1 and 2. Based on the Contents, what might we learn about bees today?</i></p>				
<p>page 7</p>	<p>Read through page 7. Before continuing on page 8, introduce the Structure and Function chart. <i>Today as we read, we’ll pay special attention to the physical features of bees: bees’ structures and the functions of those structures. We’ll write what we are learning on this chart.</i></p>				
<p>pages 8-9</p>	<p>Read pages 8 and 9. Read the heading and “Let’s zoom in close.”</p>				

	<p><i>The layout of the page is unique. Next to each fact about a bee’s features is a photo cropped in a hexagonal shape—just like the shape in a honeycomb!</i></p> <p><i>This layout draws our attention. The text names features, but doesn’t tell us why these particular features are special. Let’s record the features on our chart, and we’ll see if we find out more about the functions of those features.</i></p> <p>Collaboratively with the children, populate the left side of the chart with the features: hairy body and face, two big eyes and three little ones, very long tongue, baskets on back legs.</p>
page 14	<p>Skip to Chapter 2.</p> <p><i>Now we are going to read more about bees as pollinators. We can predict this because we see this heading [point to the heading, “Bees and Flowers”] and these detailed photographs of bees on flowers.</i></p> <p>Read the page, pausing to review vocabulary.</p> <p>Think, Pair, Share.</p> <p><i>What do you already know about nectar?</i></p> <p><i>What do you know about pollen?</i></p>
pages 16-17	<p>Read slowly and use gestures to clarify words such as “uncurls” and “dips.”</p> <p><i>What is the important function of a bee’s tongue?</i></p> <p><i>How do the kind of text [“sip, sip, sip!”] and the photograph help us understand what is important here?</i></p> <p><i>Where does this information belong on our Structure and Function chart?</i></p> <p>Add to the chart.</p>
pages 18-19	<p>Read slowly and clarify words as needed. Refer to the Weekly Word card for “marking.”</p> <p><i>Where does this information belong on our chart?</i></p> <p>Add to the chart.</p>
pages 20-21	<p>Read the pages.</p> <p><i>Turn and talk. What information here is new? What do we already know?</i></p> <p>Add to the chart.</p>
pages 22-23	<p>Read the pages.</p>

	<i>How do these illustrations help us understand what the bee does when she is dancing?</i>
Key Discussion 5 minutes	Think, Pair, Share. <i>How are bees' structures important for their survival and for pollination?</i> Facilitate a whole group discussion, referring to specific pages of the book and to the Informational Text Features chart to encourage children to connect their ideas to text.
Writing Station Prompt and Closing 3 minutes	Introduce the Writing Station prompt. <i>Today we read some pages in Amazing Bees to think about the structures of an important pollinator, the honey bee, and to find out how the text features help us understand the information in the book.</i> <i>Today at the Writing Station, you will write about this prompt: How are bees' structures important for their survival and for pollination?</i> Clarify children's questions about the prompt.
Standards	R.8.2.b Explain how various text features (e.g., headings, bold print, indexes, graphics, tables of contents, glossaries, links, icons) are used to locate key facts or information in a text efficiently. R.11.2.c Explain how specific visuals contribute to and clarify the meaning of a text. R.11.2.d Compare and contrast the information presented by two texts on the same topic. SL.1.2.a Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). 2-LSS2-3(MA) . 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. Clarification Statement: • Animals need food, water, air, shelter, and favorable temperature; plants need sufficient light, water, minerals, favorable temperature, and animals or other mechanisms to disperse seeds. SEL . Social Awareness SEL . Relationship Skills
Ongoing assessment	Note children's usage of text features as they discuss <i>Amazing Bees</i> , as well as the general quality of discussion. How do they describe the structures of bees and how this contributes to their functions and their survival?

Writing Station Response: **Amazing Bees**

Name: _____ Date: _____

How are bees' structures important for their survival and for pollination?

Unit 4: The Power of Pollinators



WEEK 3 Day 4

Text Talk
Amazing Bees
 Read 2 of 3

Big Ideas	The parts of an organism have specific functions. Pollination is a result of animal behavior.
Guiding Questions	Why are the particular parts of an organism important? How does pollination happen?
Weekly Question	What do bees need to survive?
Content Objectives	I can explain how bees pollinate in writing. (W.3.2) I can describe a sequence of steps in the scientific process of pollination by bees. (R.6.2.b, 2-LSS2-3(MA))
Language Objective	I can explain key parts in the sequence of pollination by bees. (SL.2.2.a)
Vocabulary	<p>crops: plants grown on a farm</p> <p>dip: to plunge into</p> <p>feature: a part or quality of something</p> <p>form: physical structure of shape</p> <p>function: the purpose or role of something</p> <p>honeybee: a bee that collects and stores honey</p> <p>honeycomb: the cells bees construct with wax they produce where they live and store honey (wax comb)</p> <p>insect: small creature with six legs, two sets of wings, and a body divided into three parts</p> <p>* marking: a pattern of marks or coloring on a plant or animal</p> <p>nectar: sweet liquid found in flowers</p>

petal: the colored pieces of the flower that surround the stamen and stigma
pollen: powder in the middle of most flowers
powdery: dusted or sprinkled (such as with pollen)
signpost: obvious clue
uncurl: to straighten out
waggle: short, quick movement up and down or side to side

Materials and Preparation

- *Amazing Bees*, Sue Unstead
- *Amazing Bees* slides
- projector and screen
- chart paper and markers

Prepare the following chart.

Bee Pollination				
Statement of Phenomenon: Bees pollinate flowers.				
1	2	3	4	5
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

- Pollination Explanation Sequence Sheet, cut in half, enough copies for each child to have 5 half-sheets
- writing and drawing tools

Opening
1 minute

Reintroduce the book and set the purpose for reading.
Today we will read just part of Chapter 2 of Amazing Bees by Sue Unstead. Our goal today is to understand how bees pollinate and to explain that by speaking and in writing. In Unit 2, you wrote explanations of erosion. Earlier this week, we worked to sequence a nonfiction narrative. Today, we are going to use what we are learning about pollination, along with part of the text Amazing Bees, to create an explanation sequence for pollination by bees.

Text and Discussion
pages 16-23
10 minutes

As we read, you might notice that this chapter of the text gives us a lot of useful information about pollination, but it does not make the sequence of pollination very clear. It will be our job to order the different pieces of information from the book into a sequence that makes sense.

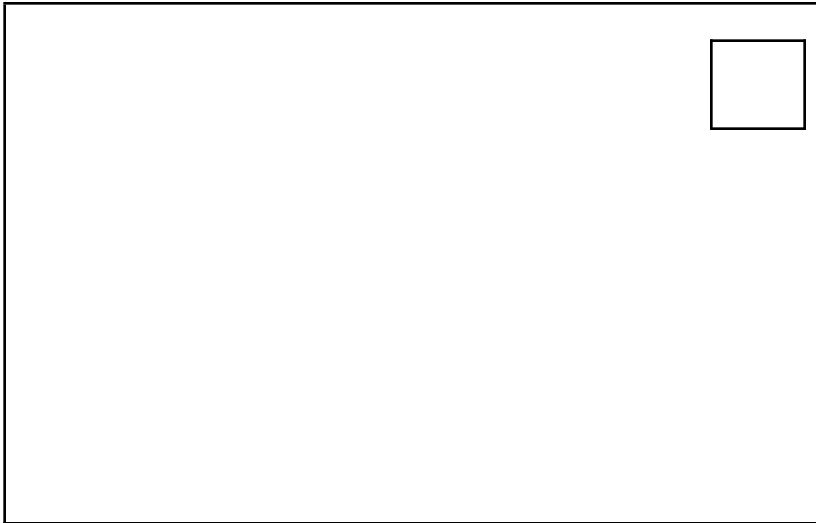
	<p>Read pages 16-23. <i>It will be useful for us to notice different pieces of information that we think are important in bee pollination. For example, one important part is that bees smell the flowers and go to them.</i></p> <p>Think, Pair, Share. <i>What are three important pieces of information that we are learning about bee pollination from Amazing Bees? What does the author think is important? Name the part of the text that tells you this is important.</i></p>
<p>Key Activity 28 minutes</p>	<p><i>The statement of phenomenon for this explanation sequence is “Bees pollinate flowers.” Now, work with a partner to write the explanation sequence for this statement of phenomenon. Remember, the explanation sequence explains how bees pollinate flowers, in order. Include as many parts of the sequence as you can.</i></p> <p>Project the text for children’s reference.</p> <p>Send children to work. Children record the important parts of bee pollination in sequence, consulting with their partners and writing on their own sheets. On each half-sheet, children draw and write one important part in the pollination sequence. When they are finished, they put the pages in order and number them (upper right corner of each page).</p> <p>When children are finished, bring the group back together. Culling from their ideas, write a five-step sequence on the Bee Pollination chart.</p>
<p>Closing 1 minute</p>	<p><i>Today we read some pages in Amazing Bees. We paid attention to the sequence of pollination by bees. With partners and then all together, we wrote explanations of how bees pollinate.</i></p>
<p>Standards</p>	<p>R.6.2.b Describe the relationship between a series of events, ideas, or concepts, using language that pertains to time, sequence, and cause/effect.</p> <p>W.3.2 Use a combination of drawing and writing to communicate a topic with a beginning, middle (including details), and an end.</p> <p>SL.2.2.a Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>2-LSS2-3(MA). 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. Clarification Statement: • Animals need food, water, air, shelter, and favorable temperature; plants need sufficient light, water, minerals, favorable temperature, and animals or other mechanisms to disperse seeds.</p>

Ongoing assessment	Listen in to partner conversations about pollination as children work together to complete the pages. Collect and review the Bee Pollination sequences. In speaking and writing, do children explain an accurate sequence of pollination by bees? What do they articulate in conversation? What do they include in writing? Are any misconceptions revealed?
---------------------------	---

Notes

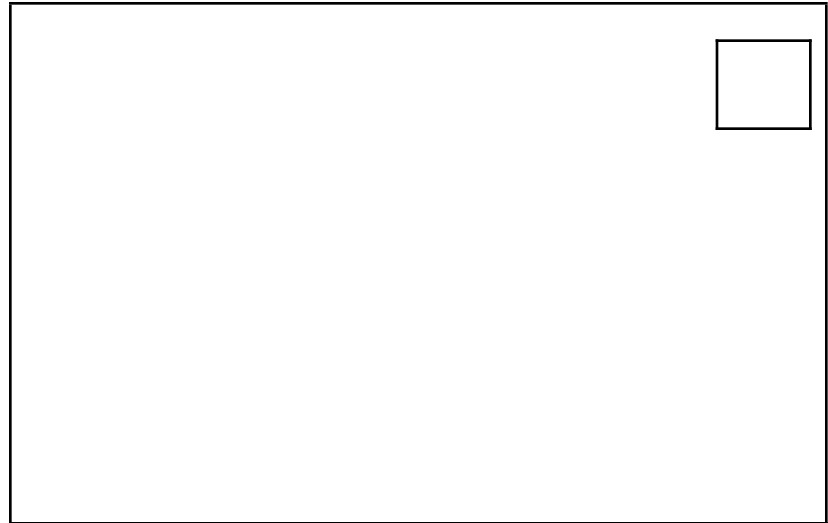
Name: _____

Bee Pollination Explanation Sequence



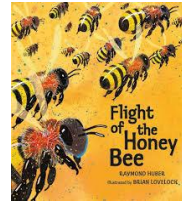
Name: _____

Bee Pollination Explanation Sequence



Unit 4: The Power of Pollinators

WEEK 3 Day 5



Text Talk
Flight of the Honey Bee* and *Amazing Bees
 Read 3 of 3 (each text)

Big Ideas	The parts of an organism have specific functions. Pollination is a result of animal behavior.
Weekly Question	What do bees need to survive?
Content Objective	I can compare the important points and structure of two different texts about bees. (R.11.2.c, R.11.2.d, LSS2-3(MA))
Language Objective	I can explain how the word choices in two different texts support meaning making. (L.5)
SEL Objective	I can communicate effectively using a discussion protocol. (Relationship Skills)
Vocabulary	<p>attract: to interest, to draw closer (* Week 2)</p> <p>captivated: fascinated, enthralled (held “captive” with interest)</p> <p>communicate: to share information</p> <p>compass: an instrument used to determine directions</p> <p>dip: to plunge into</p> <p>humming: full of busy activity</p> <p>insect: small creature with six legs, two sets of wings and a body divided into three parts</p> <p>miniature: a tiny version of something bigger</p> <p>* navigate: to find one’s way to, around, or through</p> <p>nectar: sweet liquid found in flowers</p> <p>petal: the colored pieces of the flower that surround the stamen and stigma</p> <p>pollen: powder in the middle of most flowers</p>

static electricity: an electric charge that does not move and that causes hair to stick out
uncurl: to straighten out
waggle: short, quick movement up and down or side to side

Materials and Preparation

- *Amazing Bees*, Sue Unstead
Flag pages 7, 16-17, and 22-23.
- *Flight of the Honey Bee*, Raymond Huber
Flag pages 9, 14, and 20.
- *Amazing Bees* and *Flight of the Honey Bee* text excerpts, enough for each pair to have a set
- chart paper and markers
Prepare the following Comparing Two Texts chart.

Comparing Two Texts			
Topic		<u>Flight of the Honey Bee</u>	<u>Amazing Bees</u>
Bee flying	How the language sounds		
	Information we learn		
Bee coming to a flower	How the language sounds		
	Information we learn		
Bee dancing	How the language sounds		
	Information we learn		

On the whiteboard, write the following questions.

What do you notice that is the same or different about how the texts' language sounds?

What is the same or different about the information we learn in these pages?

Review the Back to Back, Face to Face routine (Introduction, Part 1).

Opening

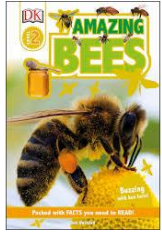
Reintroduce the texts and set the purpose for reading.

<p>1 minute</p>	<p><i>Today we are going to revisit Flight of the Honey Bee and Amazing Bees side by side. We have learned a lot about bees from these two texts, but the authors have presented the information in very different ways. Our goal today is to compare the two texts to see how the authors convey information and also to see how we can deepen our knowledge by reading two texts on the same topic.</i></p>
<p>Text and Discussion 23 minutes</p> <p><i>Flight of the Honey Bee,</i> page 9 and <i>Amazing Bees,</i> page 7</p>	<p><i>Let's start by looking closely at two pages from each text. Both passages describe how bees fly.</i></p> <p>Read the two passages aloud, including the fact box in <i>Flight of the Honey Bee</i>.</p> <p>Prepare for the Back to Back, Face to Face routine. <i>You will find a partner to stand back to back with. I will give you time to think about a question. Then, you will turn to face your partner and share your responses. Then you will find a second partner to think and talk with about a new partner.</i></p> <p>Allow time for children to arrange themselves back to back with partners.</p> <p><i>Here's your first question: What do you notice that is the same or different about how the texts' language sounds?</i> [For example, <i>Amazing Bees</i> doesn't have figurative language. The sentences are short. There are not that many adjectives. In <i>Flight of the Honey Bee</i>, the author tells a story with descriptive sentences and figurative language.]</p> <p>Provide a moment for children to think, and then direct them to turn around and discuss their ideas with their partners.</p> <p>Direct children to find a new partner. Read the passages a second time. <i>This time, ask yourself: what is the same or different about the information we learn in these pages?</i></p> <p>Provide a moment for children to think, and then direct them to turn around and discuss their ideas with their partners.</p> <p>Bring the children's attention back to the group, either staying with their partners or returning to their seats. Invite children to share ideas they discussed, and add to the chart.</p>
<p><i>Flight of the Honey Bee,</i> page 14 and</p>	<p>Use the Back to Back, Face to Face routine again. Read the two passages aloud.</p> <p><i>The topic for these two passages is how the bee comes to the flower. This time you can look at the printed text.</i></p>

<p><i>Amazing Bees</i>, pages 16-17</p>	<p>Direct children to return to their previous partners or to find new ones. Distribute the printed text pages so that in each pair one child has the <i>Flight of the Honey Bee</i> text, and the other child has the <i>Amazing Bees</i> text.</p> <p style="text-align: center;"><i>Here's the first question: What do you notice that is the same or different about how the texts' language sounds?</i></p> <p>Provide a moment for children to think, and then direct them to turn around and discuss their ideas with their partners.</p> <p>Direct children to find a new partner.</p> <p>Read the passages a second time while children follow along on the printed text.</p> <p style="text-align: center;"><i>This time, ask yourself: what is the same or different about the information we learn in these pages?</i></p> <p>Provide a moment for children to think, and then direct them to turn around and discuss their ideas with their partners.</p> <p>Bring the children's attention back to the group, either staying with their partners or returning to their seats. Invite children to share ideas they discussed, encouraging them to cite the texts, and add to the chart.</p> <p>Collect the printed texts.</p>
<p><i>Flight of the Honey Bee</i>, page 20 and <i>Amazing Bees</i>, pages 22-23</p>	<p style="text-align: center;"><i>Let's do one more comparison.</i></p> <p>Read the two passages aloud.</p> <p style="text-align: center;"><i>What are these pages about?</i> [bee dancing]</p> <p>Facilitate the Back to Back, Face to Face routine one more time.</p> <p>Bring the whole group back together. Invite children to share ideas they discussed, and add to the chart.</p>
<p>Key Discussion 10 minutes</p>	<p>Synthesize thinking in a group discussion.</p> <p style="text-align: center;"><i>What do you notice about these two different texts?</i> <i>What patterns do we notice between the two?</i> <i>What is always different? What is always the same?</i></p> <p>Facilitate the group conversation, reminding children to refer to each other's contributions and to use established discussion prompts as needed.</p> <p style="text-align: center;"><i>What are some really important ideas we are learning about bees, and why is it helpful to have two different texts to help us learn</i></p>

	<i>those things?</i>
Closing 1 minute	<i>Today we compared some pages in Amazing Bees and Flight of the Honey Bee. Our goal was to compare the two texts to see how the authors convey information differently and also to see how we can learn more about a topic by reading two different texts on that topic.</i>
Weekly Question Chart 5 minutes	<p>Refer to the Weekly Question Chart. <i>This week we have been thinking about this question: What do bees need to survive?</i></p> <p>Read the chart together. Add any essential ideas that may be missing. Identify and color-code 2-3 themes that emerge. Some themes might be: Bees and flowers are interdependent. Bees travel far to collect the nectar and pollen they need to live.</p> <p>Save this chart for use in Week 5.</p>
Standards	<p>R.11.2.c Explain how specific visuals contribute to and clarify the meaning of a text.</p> <p>R.11.2.d Compare and contrast the information presented by two texts on the same topic.</p> <p>L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings sufficient for reading, writing, speaking, and listening.</p> <p>2-LSS2-3(MA). 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. Clarification Statement: • Animals need food, water, air, shelter, and favorable temperature; plants need sufficient light, water, minerals, favorable temperature, and animals or other mechanisms to disperse seeds.</p> <p>SEL. Relationship Skills.</p>
Ongoing assessment	<p>Listen into pairs' conversations about the two texts.</p> <p>Review the chart and consider the contributions of each child.</p>

Notes



Amazing Bees text excerpt, pages 16-17

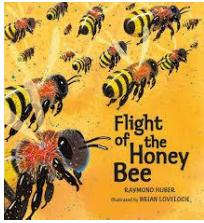
Sweet Nectar

A bee smells the flower and flies to it. It lands on a petal looking for the sweet, sugary juice.

The bee uncurls its long tongue and dips it deep inside the flower.

Sip, sip, sip!

It sucks up the nectar.



Flight of the Honey Bee text excerpt, page 14

When the coast is clear, Scout is drawn to the sea of flowers again. She settles on a velvety petal and plunges her head into the flower. Here is sunken treasure: a cup of sweet nectar. The tip of her tongue, shaped like a miniature spoon, sips the syrup.

Scout zigs and zags from flower to flower, spreading pollen around. The pollen clings to her fuzzy body—a sprinkle of sun-powder.

Bees are charged with static electricity during flight, which attracts pollen to their bodies. They have an extra stomach in which they carry the nectar home.

Unit 4: The Power of Pollinators

WEEK 3

Stations

Station	Activities	Materials
		Writing tools at each station
Guided Independent Reading		<ul style="list-style-type: none"> individual book bags
Teacher groups: strategic small group instruction		
Listening & Speaking	Listen and Respond	<ul style="list-style-type: none"> audio recording and technology “Apples and Bees” informational text “Apples and Bees” slides conversation prompts
Science Literacy	How have your seeds changed?	<ul style="list-style-type: none"> Unit 4 Science and Engineering packets colored pencils
Vocabulary	Choose 3!	<ul style="list-style-type: none"> Week 2 Weekly Words cards Recording sheets Choose 3! menu
	Talk About It: What are three questions you would like to ask this young beekeeper?	<ul style="list-style-type: none"> Weeks 2 and 3 Weekly Words cards Week 3 image, 2 copies cut apart Week 3 sheets
Word Work <i>(align skills with literacy program)</i>	Marking double vowels (oo/ou/ue/ew)	<ul style="list-style-type: none"> Week 3 Name It, Write It, Mark It sheets
	Choosing vowel teams (ew/oo)	<ul style="list-style-type: none"> Week 3 Name It, Choose It, Read It sheets
	Finding words with ew/oo vowel teams, using them in sentences	<ul style="list-style-type: none"> Week 3 Find Them! sheets
	Writing words, using them in sentences	<ul style="list-style-type: none"> Week 3 Look Cover Write Check sheets
Writing	Prompt from Text Talk Day 3: Sequencing pages	<ul style="list-style-type: none"> children’s sequencing pages, in process

Writing Station Response: **Amazing Bees**

Name: _____ Date: _____

How are bees' structures important for their survival and for pollination?

“Apples and Bees” Conversation Prompts: Cut apart and provide with text and audio recording.

Page 2:

Why do apple orchards need to have different kinds of apple trees?

“Apples and Bees

Page 3:

Why are honey bees so important to farmers?

“Apples and Bees”

After reading:

Work with a partner.
Choose one page, and identify the main idea of that page.
If you have time, find the main idea on another page.

“Apples and Bees”

I agree with you, and I would like to add on ____.

I respectfully disagree with you because ____.










What evidence do you have to support that?

Name: _____

Name It	Write It	Mark It
---------	----------	---------

Write the word. Circle and mark the double vowel.

Word Bank							
hoop	soup	group	glue	threw	boots	bamboo	screw

 s t e w d _____ ----- _____	 _____ ----- _____	 _____ ----- _____
 _____ ----- _____	 _____ ----- _____	 _____ ----- _____
 _____ ----- _____	 _____ ----- _____	 _____ ----- _____







Skills: Know and apply grade-level phonics and word analysis skills in decoding words.

Name: _____

Name It	Choose It	Read It
---------	-----------	---------

Name the picture. Circle the vowel team that completes the word and write it in the space. Read the word.

ew or oo

 bl____m	 scr____s
 shamp____	 bamb____
 bl____	 ch____

Skills: Know spelling-sound correspondences for additional common vowel teams.

Name: _____

Find Them!
Vowel Teams

Look through your books to find words with the vowel teams **ew** and **oo**. Write the words you find. Circle the vowel teams.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Skills: Know spelling-sound correspondences for additional common vowel teams.

Use them in Sentences

Choose four words from the list above. Use each one in a sentence.

1. _____

2. _____

3. _____

4. _____

Talk About It



<https://www.mothersfinesturbanfarms.com/pages/the-farm>



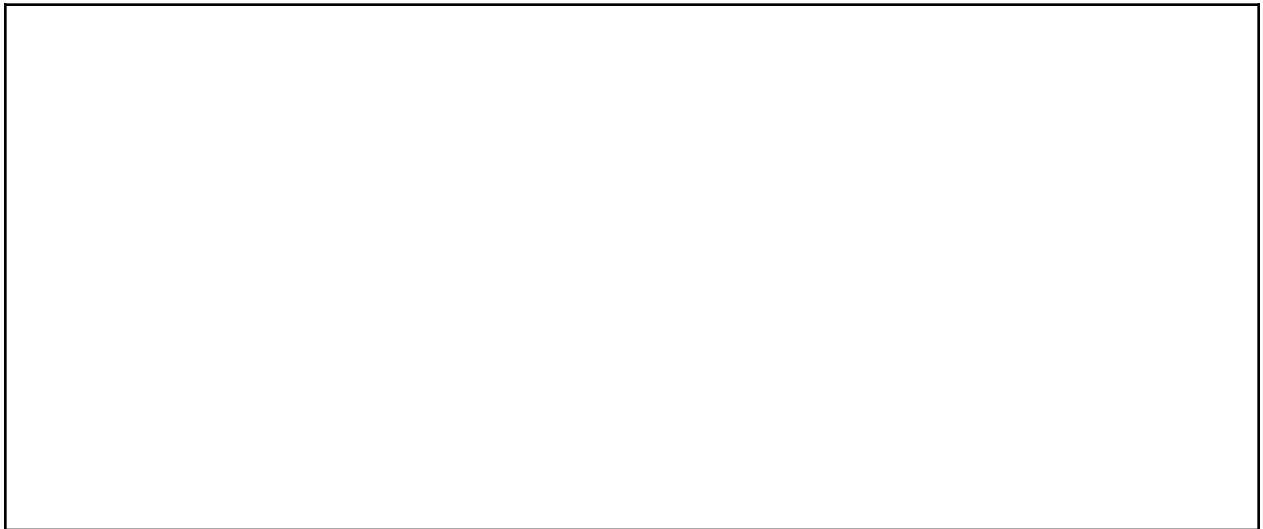
<https://www.mothersfinesturbanfarms.com/pages/the-farm>

Talk About It

Name: _____ Date: _____

What are three questions you would like to ask this young beekeeper?

Look carefully at the image. **Talk** with your partner, **draw and write** about your ideas, and then **share** your writing. Use important vocabulary words as you talk and write. **Circle** the important words you use.



Unit 4: The Power of Pollinators

WEEK 3 Lesson 1

Science and Engineering: Quadrat Study 7

Observing Plants

This lesson connects to and continues the year-long Quadrat Study.

Big Ideas	Organisms in an ecosystem are interdependent. Living things grow and change over time.
Guiding Questions	What makes particular organisms interdependent? Why is it important to understand how living things grow and change over time?
Content Objective	I can make observations about the different kinds of living things in my quadrat and describe how they depend on each other to live and grow. (2-LS2-3 (MA), 2-LS4-1, Practice 6)
Language Objective	I can describe the living things I observe in speaking and writing. (L.6.2.a, W.2.2.a)
Vocabulary	distribution: the way something is shared in a group or spread over an area mature: fully grown organism: living thing quadrat: a small area of habitat, usually selected to collect data about the distribution of plants or animals sprout: young plant
Materials and Preparation	This lesson occurs outdoors. Review children’s entries in Science and Engineering packets from the first quadrat study. Select a few that show different and informative observations. <ul style="list-style-type: none">• hula hoops or equivalent lengths of rope or twine knotted to enclose a circle, one for each child• Science and Engineering packets

	<ul style="list-style-type: none"> ● writing and drawing tools, in one or more containers to carry outdoors ● hand lenses, one for each child ● chart paper and markers
<p>Opening 9 minutes</p>	<p><i>Today we're going back out to the schoolyard to continue our quadrat study. Remember, in a quadrat study scientists study the distribution of objects or organisms in an area—or how many of something there are.</i></p> <p><i>Let's take a look at a couple of observations from our last quadrat study. Last time, we observed the rocks in our quadrat. We compared the rocks and tried to determine if the smaller rocks we observed were part of a larger rock.</i></p> <p>Show the selected examples. Use a simplified Science Circle protocol to guide the conversation, informally introducing this routine.</p> <p><i>Today, we will shift to observing organisms, or living things. We have been studying seeds and plants; pay close attention to any plants you see in your quadrat. What plants do you think you might find? Do you think they will be mature, or fully grown? Do you think they could be sprouts, or young plants?</i></p> <p>Distribute packets. Take the children out to the schoolyard with quadrat markers (hula hoops/ropes) and writing and drawing tools.</p> <p>Direct children to return to their same spots.</p>
<p>Investigation 15 minutes</p>	<p>Once outside, offer reminders as needed for placing quadrat markers on the ground, observing everything within its frame, and describing and recording as many plants as possible. Emphasize identification of sprouts, seeds, and mature plants.</p> <p>As children work, circulate to support their investigation and representation. Ask the following questions.</p> <ul style="list-style-type: none"> ● <i>What do you notice?</i> ● <i>What plants do you find?</i> ● <i>Is this a mature plant or a sprout? What makes you think so?</i> ● <i>How does this plant get what it needs to live and grow?</i> ● <i>How do you think this plant got here?</i> <p>If a child's quadrat includes no plants, ask them to record that data. Ask the following questions.</p> <ul style="list-style-type: none"> ● <i>Why do you think there are no plants growing in this area?</i>

	<ul style="list-style-type: none"> • <i>Do you think a plant could grow here?</i> • <i>What might you change to help a plant grow here?</i> <p>Identify a few children to share their work with the whole group. Bring the children back indoors.</p>
Discussion 5 minutes	Set aside all materials except children’s packets. Ask identified children to share and describe their work. Encourage them to use precise vocabulary.
Closing 1 minute	<i>What did you learn about your quadrat by observing plants?</i> Encourage children to use the “Me, too” signal to make connections.
Standards and Practices	<p>L.6.2.a Use words and phrases acquired through conversations, reading, and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., When other kids are happy, that makes me happy).</p> <p>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.</p> <p>2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.</p> <p>2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</p>
Ongoing assessment	<p>As children work to record their observations, take note of their approach to the task, particular interests, and how they might be best supported with ongoing outdoor learning.</p> <p>Review children’s packets.</p> <p>What plants did children record? How did they describe what a plant needs to live and grow in their quadrat?</p> <p>As children continue this work, look for greater details in their drawing and writing and increasingly meaningful connections to current unit content.</p>

Notes

Unit 4: The Power of Pollinators

WEEK 3 Lesson 2

Science and Engineering: Life Sciences Ecosystems: Learning about Roots and Measuring Growth

Big Idea	The parts of an organism have specific functions.
Guiding Question	Why are the particular parts of an organism important?
Content Objectives	I can record my observations of roots in drawing and writing. (W.1.2.b) I can use my five senses to gather information about the structure and function of roots on my plant. (Practice 6, 2-LS2-3(MA)) I can use a ruler to measure the length of my plant. (Practice 5)
Language Objective	I can discuss my observations of roots with my peers. (SL.1.2)
Vocabulary	develop: to form new parts drought: a time with very little rainfall, leading to a shortage of water grow: to get bigger radicle: the root part of the embryo, an undeveloped root root: the part of the plant that grows underground and collects water and nutrients
Materials and Preparation	Read the background information in Science in Unit 4 (Unit Introduction). <ul style="list-style-type: none">● started seeds in plastic bags, organized by group Choose one bag and, if the full root is not visible, gently unwrap it and place it back inside the bag.● Science and Engineering packets● writing and drawing tools● Plant Growth Graphing paper, 1 sheet starting at zero for each child● chart paper, 1 blank sheet● markers, various colors● rulers, 1 for each child

	<ul style="list-style-type: none"> ● About Plants chart, from previous weeks ● Roots slides ● projector and screen
<p>Opening 2 minutes</p>	<p>To clarify the purpose of this lesson, refer to the Weekly Question, What do bees need to survive?</p> <p><i>The seeds you planted are growing and developing: getting bigger and forming new parts. We will continue to observe our plants' development. Just like before, you will record the date and the question you are investigating at the top of your page. Today you will also measure and record the plants' growth, and we'll talk about one structure of a plant that helps it grow.</i></p> <p><i>We'll use rulers to measure how much the plants are growing. What suggestions do you have for placing the ruler to measure this plant?</i></p> <p>Integrate children's knowledge about measurement by discussing how to place the ruler to place zero at the base of the plant.</p> <p><i>The <u>start point</u> is where you begin measurement, at the zero. We will start measuring at the bottom of the longest root.</i></p> <p><i>The <u>end point</u> will be the top of the plant. That's how tall it is, or its height.</i></p> <p>Demonstrate how to use the ruler to measure the length of the entire plant, including the longest root. Then measure the length of just the stem. Finally, measure the length of the roots. Add the plant's length to the Plant Growth Graphing Paper.</p> <p><i>In Text Talk we are learning about bees and their body parts. Bees are organisms that are important to many plants. Bees have specific structures to help them survive. Plants also have specific structures that help them get what they need to survive. Today we will see if we can find one of those structures on our beans.</i></p> <p><i>The seeds in our plastic bags have been sprouting for two weeks. Today you will make careful observational recordings of the seeds, paying especially close attention to the roots. As you are making your observations, make and record three measurements: the length of the entire plant, the length of the stem, and the length of the roots. Also include your ideas about how roots help the plant get what it needs to grow. We will then gather to share what we observed and questions we might have.</i></p> <p>Rewrap the seed and new plant in paper towels, if needed.</p>
<p>Investigation 15 minutes</p>	<p>As children record their observations, circulate to support them. Ask the following questions.</p>

	<p><i>How long is the entire plant?</i> <i>How long is the stem?</i> <i>How long are the roots?</i> <i>What do you notice about the roots of this plant?</i> <i>How might the roots help the plant live and grow?</i> <i>Why do you think there are so many roots?</i> <i>Why do you think the roots are the first part of the plant to develop from the seed?</i> <i>What other changes do you notice in these seeds?</i></p>
<p>Discussion and slides 13 minutes</p>	<p>Gather children back in the large group with their packets. Use one bean plant as a model to create a class diagram. Invite children to take turns contributing to a large, collaborative diagram of a sprouted bean seed. Have children measure and record the length of the roots, stem, and the entire plant.</p>
<p>slides 2-3</p>	<p>Show slides 2 and 3. Revisit the experience of opening seeds and looking at the labeled diagram. Note that the scientist who made this diagram included labels for different parts of the embryo, including the radicle.</p>
<p>slide 4</p>	<p>Reintroduce how a time-lapse video works (showing a long process in a much-shortened period of time), and then show the video on slide 4.</p> <p><i>What do you notice about the plant in this video?</i> <i>How did the plant change from day to day?</i> <i>What are some functions of a root system? How do they help a plant survive?</i> <i>Why do you think there are so many roots?</i> <i>Why do you think the roots keep growing longer?</i></p>
<p>slides 5-6</p>	<p>Show slides 5 and 6.</p> <p><i>What do you notice about the lengths of the roots of these plants?</i> <i>Why do you think some plants have roots that are much longer than the rest of the plant?</i> <i>We talked about roots when we were learning about erosion, remember? While roots are growing to soak up water and its nutrients, they are also helping to hold the plant and the land around it in place.</i></p>
	<p><i>Look back at your observational drawings. What do you notice about how your plants are developing?</i> <i>Is the stem unfolding?</i> <i>Are there any leaves showing?</i></p> <p>Note that various bean seeds might be more or less developed; some seeds</p>

	<p>may not have sprouted at all. Ask children why this might be the case, and refer to the seeds’ various growing conditions. Throughout the discussion, refer to the About Plants chart, as appropriate.</p>
Closing	<p><i>Today we looked carefully at our developing plants, and especially at the roots. Roots are for collecting water and nutrients. These nutrients are like vitamins, to help the plants grow healthy and strong. Roots also store nutrients for when there is a period of drought—when there is very little water in the environment.</i></p>
Standards and Practices	<p>SL.1.2 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.</p> <p>W.1.2.b Gather information from provided sources and/or recall information from experiences in order to answer questions.</p> <p>2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.</p> <p>2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</p>
Ongoing assessment	<p>Reflect on the class discussions.</p> <p>What language do children use to describe the roots?</p> <p>What connections do children make between the structure of the roots and their function?</p> <p>In what ways do children connect this discussion to understandings developed in Unit 2?</p>

Notes

7"												
6½"												
6"												
5½"												
5"												
4½"												
4"												
3½"												
3"												
2½"												
2"												
1½"												
1"												
½"												
Date												
Day	1	2	3									

Measuring and Graphing Plant Growth

Names: _____

Plant: _____

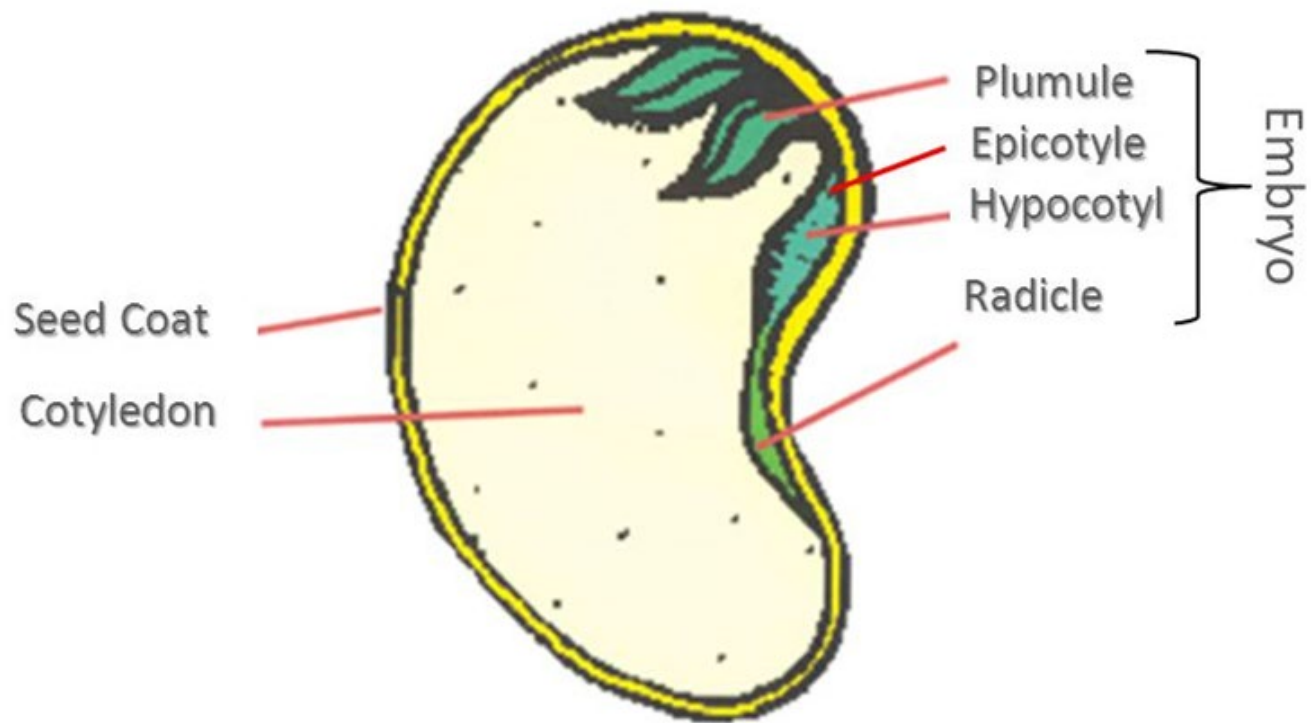
16												
15½"												
15												
14½"												
14"												
13½"												
13"												
12½"												
12												
11½"												
11"												
10½"												
10"												
9½"												
9"												
8½"												
8"												
7½"												

Roots

Science and Engineering, Week 3, Lesson 2

Inside a
bean seed









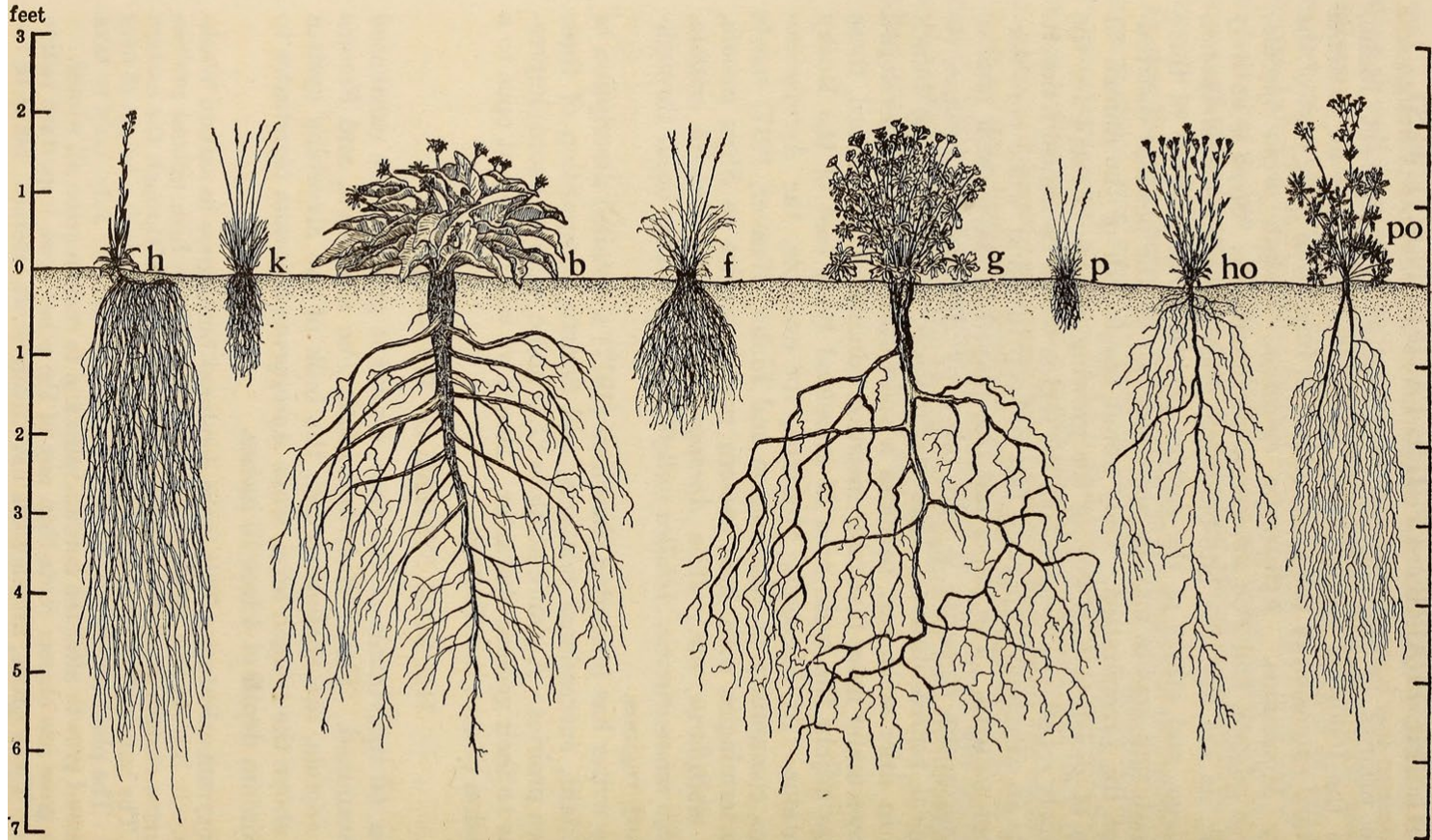


FIG. 6.—Schematic bisect showing the root and stem relations of important prairie plants. This and figures 7 and 8 were drawn from photographs and data obtained by the excavation and examination of 325 root systems of these 18 species: *h*, *Hieracium scouleri*; *k*, *Koeleria cristata*; *b*, *Balsamorhiza sagittata*; *f*, *Festuca ovina ingrata*; *g*, *Geranium viscosissimum*; *p*, *Poa sandbergii*; *ho*, *Horebekaia racemosa*; *po*, *Potentilla blaschkeana*.

Citations

Slide 2: Photo: Ana Vaisenstein

Slide 3: <http://slideplayer.com/slide/5661370/>

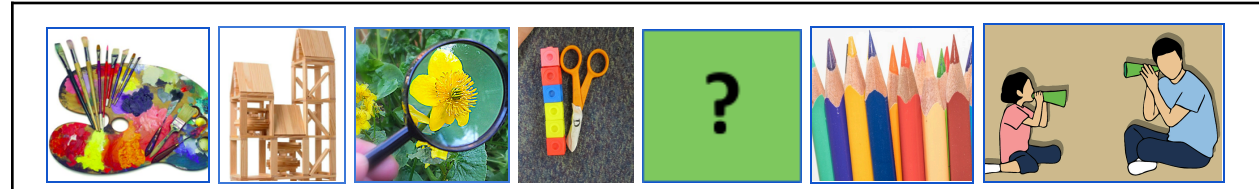
Slide 4: <https://www.youtube.com/watch?v=w77zPAAtVTul&t=2s>

Slide 5: https://en.wikipedia.org/wiki/Panicum_repens

Slide 6: By Weaver, John E. (John Ernest), 1884-1966 [No restrictions], via Wikimedia Commons

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>Big Ideas</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>Guiding Questions</p>	<p>What do bees need to survive?</p>
<p>Materials and Preparation</p>	<ul style="list-style-type: none"> ● Parts of a Flower poster ● new studios prompts Cut apart and replace studios prompts. ● Unit 4 Observation Sheet <p><u>New for the Art Studio:</u></p> <ul style="list-style-type: none"> ● Making Shadow Puppets procedure, 2-4 copies in sleeve protectors ● black cover stock paper, some cut into halves and some into quarters ● scrap paper ● white and/or graphite pencils ● scissors ● glue sticks ● wooden coffee stirrers, enough for 1 or 2 per puppet ● tape ● paper fasteners, optional, for more complicated puppets ● <i>Cuckoo</i>, Lois Ehlert <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"> ● cardboard box

- 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>Opening</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;">Art</p> 	<p>Making Shadow Puppets for Pollination Plays Possibly also: Making a Shadow Puppet Theatre <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>
---	--

	<p>Facilitation: 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>Ongoing Assessment: 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>Building</p> 	<p>Building Beehives from Around the World Possibly also: Making a Shadow Puppet Theatre</p> <p>Content Objective: 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>Process: Children look at images of beehive designs from around the world and build models of those, or build their own designs.</p> <p>Facilitation: <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>Ongoing Assessment: 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>Discovery</p>	<p>Ongoing Observations and Observational Recordings of Plants Talking about Roots</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>Research</p> 	<p>Drawing “Flight of the Bumblebee”</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>Adding fact boxes to <i>Flight of the Honey Bee</i></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>
--	---

<p>Writing and Storytelling</p> 	<p>Pollination Puppet Plays</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>
--	--

<p>Standards</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> 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.</p> <p><u>Math:</u> QR.C.6 Use place value understanding and properties of operations to add and subtract. 2.NBT.B.7; 2.NBT.B.8</p>
-------------------------	--

Art Studio

While you are working, think about:

Why is this puppet an important part of a pollination story?

What other characters would be needed along with this one?

Building Studio

While you are working, think about:

Why might a beehive include this feature?

What can we understand about bees by looking closely at where they live?

What do all of these beehive designs have in common?

What materials would work best to build this beehive in real life? Why?

Discovery Studio

While you are working, think about:

What's happening here?

What is similar and different about these roots? Why might that be?

What adjectives can describe these roots?

How might these roots have an impact on erosion?

Math Studio

While you are working, think about:

What math strategies are helpful in this game?

How are you making decisions about which number goes in the hundreds/tens/ones place?

What is your plan for your next move?

Research Studio

While you are **listening to music**, think about:

What do I hear?

What does that make me think about?

How will I represent that idea?

Does this music give me any new questions about bees?

Research Studio

While you are **creating fact boxes**, think about:

Where do we need another fact box?

Why is this fact important to add to the book?

How does this information connect to the narrative, or story, of Scout?

Writing and Storytelling Studio

While you are working, think about:

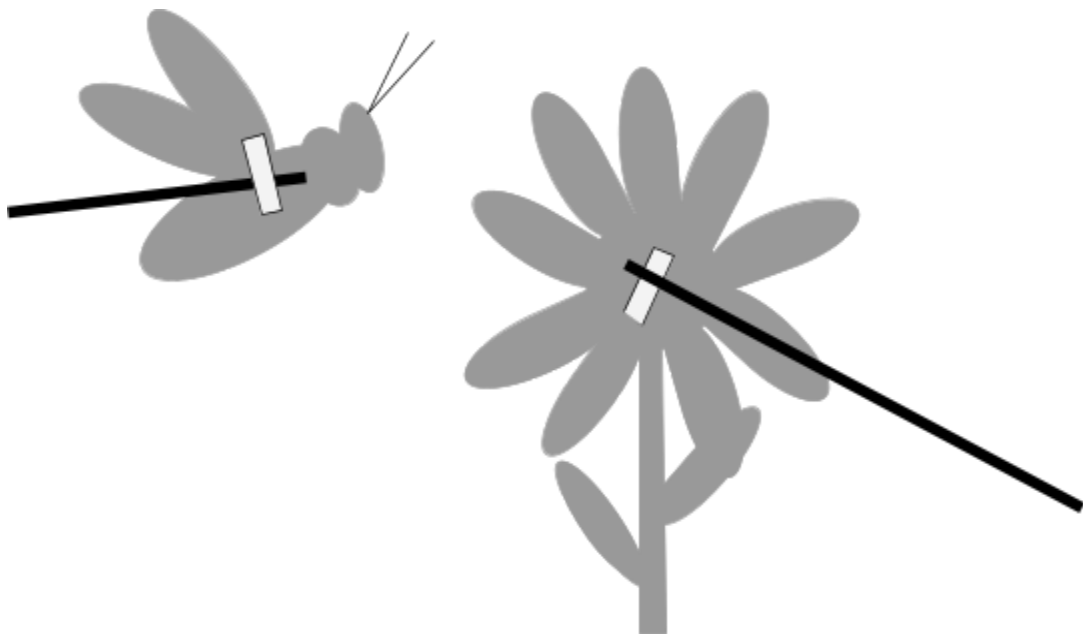
What is this story about?

Who are the characters?

What do you hope your audience enjoys and learns from your puppet play?

Making Shadow Puppets

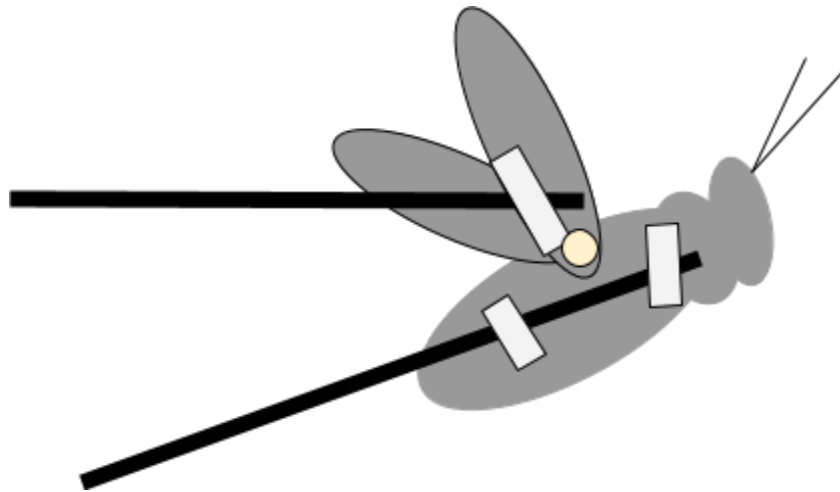
1. Decide what character or shape to make. Sketch it on scrap paper.
2. Using a white or regular pencil, draw the shape on heavy, black paper.
3. Cut it out.
4. To make a complicated shape, you might cut out separate shapes and glue them together.
5. Using tape, attach a wooden stick to the back. The puppet will be easiest to use if the stick comes out from the side of the puppet, like this:



To make puppets with moveable parts:

1. After you cut out your shapes, attach two main parts with paper fasteners.
2. Attach a wooden stick to each part.

You will need to use two hands at the same time to use this kind of puppet.



Beehives From Around the World



Portugal



China



Kenya



Ukraine



Cameroon



Armenia



India



India



Australia



Slovenia

Building Studio U4 W3



Albania



United States

Building Studio U4 W3



Rwanda



China



United States

Sources:

Portugal: <https://commons.wikimedia.org/wiki/File:Beehive.JPG>
China: <http://4yourbeeswax.blogspot.com/2010/07/bee-hives-of-world.html>
Kenya: <http://elephantsandbees.com/kenya/>
Ukraine: <http://4yourbeeswax.blogspot.com/2010/07/bee-hives-of-world.html>
Cameroon: <http://4yourbeeswax.blogspot.com/2010/07/bee-hives-of-world.html>
Armenia: <http://4yourbeeswax.blogspot.com/2010/07/bee-hives-of-world.html>
India: <http://keepingbee.org/beekeeping-in-india/>
India: https://en.wikipedia.org/wiki/Beekeeping_in_India
Australia: <https://www.keepingbackyardbees.com/the-flow-hive/>
Slovenia: <https://permies.com/t/40610/critters/Slovenian-Bee-Hives>
Albania: <https://pixabay.com/en/albania-beehives-apiculture-europe-1150520/>
United States: <http://www.greenfret.com/projects/beekeep.html>
Rwanda: <http://www.newtimes.co.rw/section/read/64275>
China: <http://www.globaltimes.cn/content/880317.shtml>
United States: Melissa Tonachel

Roots Images

Cut into cards.
Pair with discussion prompts.





Discovery Studio U4 W3

Focus on Second/ 2nd Grade for ME | Boston Public Schools Department of Early Childhood P-2/
Maine Department of Education



Talking about Roots

How would you describe these roots?

What is the same about these roots and other ones we see?

What is different about these roots from other ones we see?

Why might these roots be shaped like this?

Where would a plant with roots like these likely grow?

Could we eat these roots?

Discussion Prompts

I agree with you about _____, and I also think _____.

I disagree with you about _____, because I think _____.

I heard you say _____, and I want to add _____.

Why do you think that?

Unit 4: The Power of Pollinators

WEEK 3 Days 1-3

During Days 1-3 children continue to write independently and to receive feedback on their work using Thinking and Feedback (see Week 2, Day 5 for a detailed lesson). In addition, children's writing is assessed using the Report Observation Tool, and individual/small group/whole group lessons are added in response to children's needs.

Preparation:

Review each child's Report Observation Tool. Note any trends that are emerging. Plan for individual, small group, or whole group instruction based on these needs. Areas of need may include, but are not limited to, the following.

Writing Report: (see the attached lessons for recommendations)

- turning research into writing
- the third person
- general nouns
- adjectives

Conventions: (no suggested lessons included)

- writing and expanding complete sentences
- capitalization
- end punctuation, commas, and apostrophes
- applying rules and strategies taught in *Foundations*

Writing Behaviors: (no suggested lessons included)

- using spelling strategies, such as chunking and writing word parts
- using resources such as texts, environmental print, and *Foundations* posters for spelling
- re-reading own writing

Use the following sheet to plan instruction for Days 1-3. Make additional copies as necessary to plan for multiple individual or small group lessons.

Day 1

Target Students (individual, small group, or whole group?):

Topic:

Day 2

Target Students (individual, small group, or whole group?):

Topic:

Day 3

Target Students (individual, small group, or whole group?):

Topic:

Writing Report

Review: Turning Research into Writing

Materials:

- Yellow Lady's-slipper slides, from Week 1, Day 3
- pencils
- writing folders, including brochure pages, research materials, and Report Notes packets

Process (small or whole group):

- Review the steps on slide 7 for turning research into writing.
- Guide the children to follow each step.

Writing Report

Deconstruction and Revision: The Third Person

Materials:

On the whiteboard, write:

Field thistle has a purple flower.

I know that field thistle has a purple flower.

Field thistle blooms in late summer or early fall.

I learned that field thistle blooms in late summer or early fall.

- Report anchor chart, from Week 1, Day 1
- research resources
- pencils
- children's reports

Process (small or whole group):

- Read the first set of sentences and ask which sounds more like an expert wrote it and why. Repeat the process with the second set of sentences.
- Reread the sentence beginning with "I learned..." Explain that this sentence is really about the writer as a learner, rather than focusing on information about field thistle.
- Review what it means to write in the third person—writing just about the plant, and not writing "I" or "you."
- Show the Report anchor chart. Review the use of the third person in report—to sound like an expert.
- If needed, show more examples of the third person in the research resources.
- Have children review their own writing to identify places where they may have written in the first or second person.
- Guide children to say the sentences aloud in a new way, in the third person. Then have them revise the sentences.

Writing Report

Deconstruction and Revision: General Nouns

Materials:

- Report anchor chart, from Week 1, Day 1
- *What is pollination?*, Bobbie Kalman, pages 18-19 or 20-21
- pencils
- children's reports

Process (small or whole group):

- Show the Report anchor chart. Review the use of general nouns in report: to name a class of things, rather than one in particular.
- Read the selected pages from *What is pollination?* Together, identify the general nouns [butterflies, moths, proboscises, mouthparts, flowers, pollinators, scents/wasps, flies, carnivores, insects, pollinators]. Discuss why Bobbie Kalman uses general nouns: she is writing about all [butterflies and moths/wasps and flies], not just one in particular.
- Have children review their writing, underlining the places where they named their plant with a singular, rather than a general, noun; for example, "crocus" instead of "crocuses."
- Have children reread the sentences to make sure that a general noun makes sense with the rest of the sentence. Guide them to revise their work.

Writing Report

Deconstruction and Revision: Adjectives

Materials:

- Report anchor chart, from Week 1, Day 1
- mentor text for report: *Amazing Bees* (Close-up View, pages 8-9) or a child's writing that packs information with adjectives
- pencils
- children's reports

Process (small or whole group):

- Show the Report anchor chart. Review the stages and language of report.
- Read the mentor text.
- Together identify a sentence that includes adjectives to pack information.
- Refer children back to their reports. Have them underline the nouns.
- Guide children to add adjectives by asking the following questions:
 - How many/much?
 - What kind?
 - What like?
 - Which ones? Whose?

Unit 4: The Power of Pollinators



WEEK 3 Day 4

Writing Report
 Deconstruction and Individual Construction: General Statement
 Individual Construction: Diagrams

Content Objective	I can use research notes to write a report. (W.3.2, W.2, W.1.2.b)
Language Objective	I can draw diagrams of my plant and its flower. (W.3.2, W.2, SL.3.2.b)
Vocabulary	<p>classify: to assign to a class or category</p> <p>general statement: the beginning of a report, which introduces and classifies the topic</p> <p>report: a genre of writing whose purpose is to organize information about a topic</p> <p>topic: what the writing is about</p>
Materials and Preparation	<ul style="list-style-type: none"> ● Report anchor chart, from Unit 2, Week 4, Day 3 ● General Statement and Diagram slides ● writing tools ● writing folders, including brochure pages, research materials, and Plant Notes packets ● Report Observation Tools, from Week 2, Day 3
Opening 1 minute	<i>Today you will write the general statement for your report, and you will draw diagrams of the plant and its flower.</i>
Individual Construction 28 minutes	<p>Refer to the Report anchor chart.</p> <p><i>Remember, reports begin with a general statement that introduces and classifies the topic.</i></p>
slide 2	<p><i>The general statement in this report is</i></p> <p style="text-align: center;"><i>A bee is an insect.</i></p> <p><i>This general statement introduces the topic, bees, and classifies</i></p>

	<p><i>bees as insects.</i></p> <p>Think, Pair, Share.</p> <p><i>Think about the plant you are writing about. What would be a good general statement to introduce and classify that plant?</i></p> <p>Circulate to support children’s conversations.</p> <p><i>Now you will write that general statement in this section of the brochure pages.</i></p> <p>Refer to the brochure image on the slide.</p> <p>Group the children according to the plants they are reporting on. Send them to work with writing tools and writing folders. As children write, circulate to support their work. When children finish writing their general statements, they can continue writing subtopics. When all children have finished writing general statements, bring the class back together.</p>
slide 3	<p><i>Now you will draw and label diagrams of your plant and its flower.</i></p> <p>Review the steps on the slide.</p>
slide 4	<p><i>These are additional resources you can use for drawing and labeling your diagrams.</i></p>
slide 5	<p><i>If you finish early, go back to complete your subtopics.</i></p> <p>Send the children back to their groups with writing tools and folders. As children work, circulate to support them.</p>
Closing 1 minute	<p><i>Today you wrote general statements and drew diagrams. Tomorrow we will write titles and finish writing your reports. Next week you’ll be ready to receive feedback.</i></p>
Standards	<p>W.3.2 Use a combination of drawing and writing to communicate a topic with a beginning, middle (including details), and an end.</p> <p>W.2 Develop, strengthen, and produce polished writing by using a collaborative process that includes the age-appropriate use of technology.</p> <p>W.1.2.b Gather information from provided sources and/or recall information from experiences in order to answer questions.</p> <p>SL.3.2.b Create audio/video recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.</p>
Ongoing assessment	<p>During the lesson, use the Report Observation Tool to assess the children’s individual writing.</p>

General Statement and Diagrams

Writing Unit 4 Week 3 Day 4

General Statement

Chapter 1



What is a Bee?

A bee is an insect.

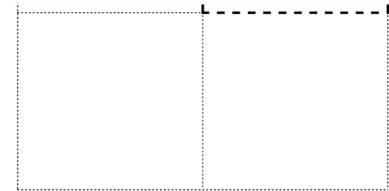
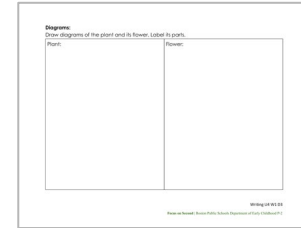
Like all insects, it has six legs. It has a body made up of three parts.



A dashed rectangular box containing five horizontal lines, intended for writing a response.

Draw Plant and Flower Diagrams

1. Review the Diagrams section of your Report Notes.
2. Look again at the images of your plant in the Plant and Flower Images packet.
3. Draw diagrams of your plant and its flower in the blank sections of your brochure pages.
4. Use the Plant and Flower Images Word Bank to help you label the parts.



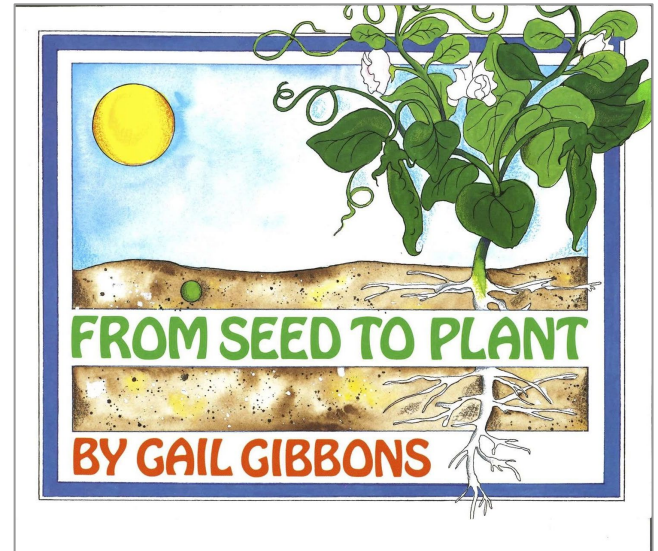
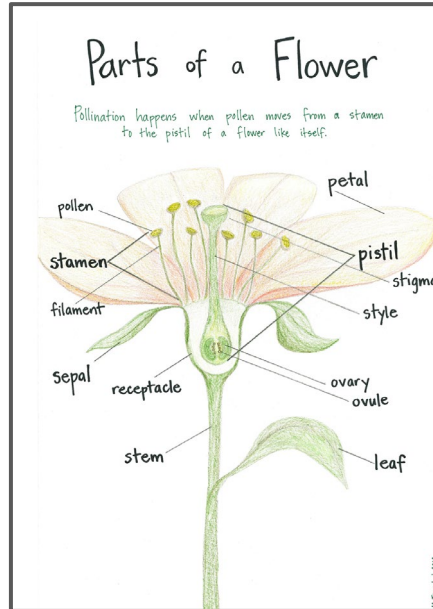
Word Bank for labeling plants and flowers				
flower	fruit	leaf	petal	pistil
sepal	stamen	stem	stigma	

Resources

Remember, you can use these resources as you draw and label your plant and flower.

Plant and Flower Images:

cardinal flower, crocus, highbush blueberry, summer squash



Write Report Subtopics

Go back to your subtopics. Is any information missing? If you missed something, you can add it now.

Don't forget to:

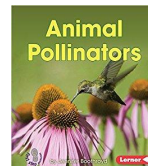
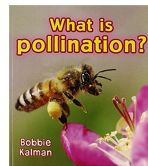
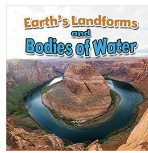
- include a heading with each subtopic
- write in **the third person**
- use **general nouns**
- add information using **adjectives**

brochure pages

Writing U4 W3
Focus on Second | Boston Public Schools Department of Early Childhood P-2

Unit 4: The Power of Pollinators

WEEK 3 Day 5



Writing Report
 Deconstruction and Joint Construction: Titles
 Individual Construction

Content Objective	I can choose an appropriate title. (W.3.2, W.2)
Language Objective	With my class I can discuss what makes a good report title. (SL.1.2)
Vocabulary	<p>publish: to prepare writing for an audience</p> <p>report: a genre of writing whose purpose is to organize information about a topic</p> <p>revise: to make changes to writing</p> <p>series: a group of things that are related or go together</p> <p>title: the name of a piece of writing</p>
Materials and Preparation	<ul style="list-style-type: none"> ● Report Titles slides ● writing tools and surfaces ● sticky notes, one for each child ● chart paper, one sheet ● writing folders, including brochure pages, research materials, and Report Notes packets ● Report Observation Tool, from Week 2, Day 2
Opening 1 minute	<i>Today we will look at the titles of reports.</i>
Deconstruction 10 minutes slide 2	<p><i>These are the titles of the report mentor texts we have been reading. What do you notice about them? What is the same? What is different?</i></p> <p>Allow children time to think, and then harvest their ideas.</p> <p><i>Report titles are usually short and tell the reader exactly what the</i></p>

	<p><i>report is about.</i></p> <p><i>The reports you are writing are all related to each other. We are creating a series of brochures. A series is a group of things that are related or that go together. [Children may relate this to a book or television series.] Often when there is a series of reports, the series has a title, and each individual report has its own title. Let's look at a few examples.</i></p>
slide 3	<p><i>What do you notice about these titles?</i></p> <p><i>This series of fact sheets are about plants that attract pollinators in Australia. Each fact sheet title includes the series title, "Pollination Aware," and the name of the specific plant the report is about.</i></p>
slide 4	<p><i>Here is another series related to pollination. What is the series about? What is the series title?</i></p> <p><i>What are the individual reports about?</i></p>
<p>Joint Construction 10 minutes</p>	<p><i>We need to decide on a title for our classroom series of report brochures. Although the reports are about different plants, they all have something in common. Think about what all of the reports are about, and what we are trying to communicate to community gardeners. Then, think of a series title that will communicate this. Write your idea on a sticky note.</i></p> <p>Allow the children time to think and generate possible series titles. As they write, circulate to support their work. When children have finished, collect their titles. Review the possible titles and decide as a class which will be most appropriate for the report series.</p> <p>Write the title of the series on the chart paper. Then decide what the title of each report will be. For example, the series could be called "Boston Native Plants" and the title of the highbush blueberry report could simply be "Highbush Blueberry." Record all report titles on the chart paper for children to use when they publish their brochures.</p>
<p>Individual Construction 8 minutes</p>	<p>With any remaining time, allow the children to continue writing. As they work, circulate to support them, and use the Report Observation Tool to assess the children's individual writing.</p>
<p>Closing 1 minute</p>	<p><i>Today we learned about report titles. Next week you will receive feedback on your reports before revising and publishing.</i></p>
<p>Standards</p>	<p>W.3.2 Use a combination of drawing and writing to communicate a topic</p>

	<p>with a beginning, middle (including details), and an end.</p> <p>W.2 Develop, strengthen, and produce polished writing by using a collaborative process that includes the age-appropriate use of technology.</p> <p>SL.1.2 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.</p>
<p>Ongoing assessment</p>	<p>During the discussion, note children’s understanding.</p> <p>What do they notice about report titles?</p> <p>What do they notice about series titles?</p> <p>After the lesson, analyze the children’s title ideas.</p> <p>To what extent do children’s ideas capture what the series of brochures is about?</p> <p>Review the Report Observation Tools.</p>

Notes

Report Titles

Writing Unit 4 Week 3 Day 5

Earth's Landforms and Bodies of Water



What is pollination?



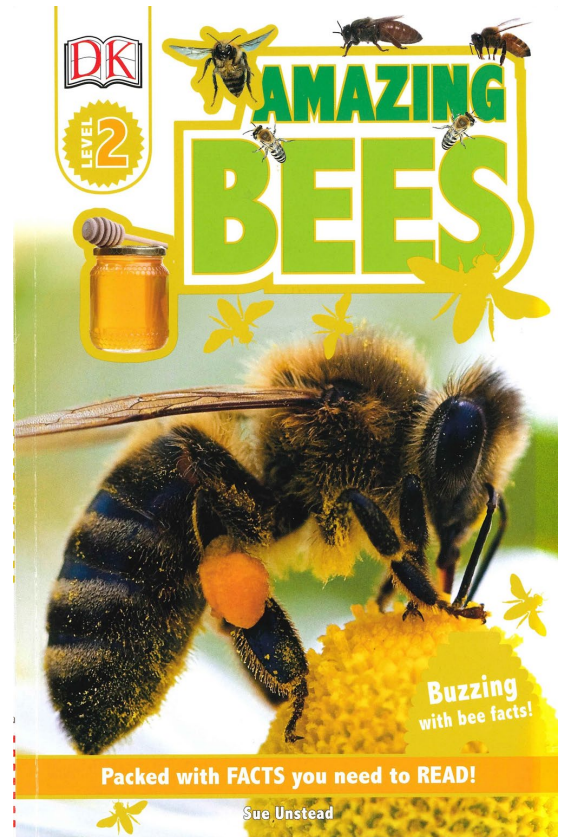
Bobbie
Kalman

Animal Pollinators



by Jennifer Boothroyd

Lerner



DK

LEVEL
2

AMAZING BEES

Buzzing
with bee facts!

Packed with **FACTS** you need to **READ!**

Sue, Unstead

Case Study 5

Pollination Aware

Blueberry

Case Study 1

Pollination Aware

Almond

Case Study 4

Pollination Aware

Avocado

POLLINATOR PLANTS

Great Lakes Region



Butterfly milkweed, purple giant hyssop, and purple prairie clover

POLLINATOR PLANTS

Southern Plains Region



Antelope horns milkweed, showy goldenrod, and buttonbush

POLLINATOR PLANTS

Northeast Region



Highbush blueberry, ninebark, and cardinal flower

POLLINATOR PLANTS

Northern Plains Region



Leadplant (foreground) and other native prairie wildflowers in bloom, blue giant hyssop, and golden tickseed