

Lesson 5: Whole Group Research: Using Text to Gather Information about Bees



- **RI.2.1:** Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details in a text.
- **RI.2.2:** Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
- **RI.2.3:** Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
- **RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
- **RI.2.5:** Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
- **RI.2.7:** Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
- **W.2.7:** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).
- **SL.2.2:** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- **L.2.1:** Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- **L.2.1e:** Use adjectives and adverbs, and choose between them depending on what is to be modified.



Daily Learning Targets

- I can research information about bees using the text *What Is Pollination?* (RI.2.1, RI.2.2, RI.2.3, RI.2.4, RI.2.5, RI.2.7, W.2.7, SL.2.2)
- I can create a scientific drawing of a bee. (W.2.7)

Ongoing Assessment

- During the research reading in Work Time A, continue to use the Reading Informational Text Checklist (RI.2.1, RI.2.2, RI.2.3, RI.2.4, RI.2.5, RI.2.6, RI.2.7) to track students' progress toward these reading standards (see Assessment Overview and Resources).
- During the Closing, circulate and listen for students to share details about their scientific drawing and what they learned about bees through their research. (W.2.7, SL.2.2)

Agenda

1. Opening

A. Song and Movement: “It’s Pollination Time,” Version 1 (5 minutes)

2. Work Time

A. Reading to Research Bees: *What Is Pollination?*, Pages 16–17 (15 minutes)

B. Shared Writing: Research about Bees: Class Notes (15 minutes)

C. Scientific Drawing of Bees: Looking Closely to Draw (20 minutes)

3. Closing

A. Sharing Our Work: Scientific Drawings of Bees (5 minutes)

Teaching Notes

Purpose of lesson and alignment to standards:

- In this lesson, students begin to conduct research to answer the research question: “How do bees help plants grow and survive?” Although similar to the Unit 2 guiding question (“How do pollinators help plants grow and survive?”), this question homes in on the focus of today’s whole group research: bees.
- In the Opening, students engage with adjectives and adverbs playfully by singing the song “It’s Pollination Time.” Across Lessons 5–9, students will continue to engage with this song as they make progress toward L.2.1 and L.2.1e.
- In Work Times A and B, students participate in research reading using the text *What Is Pollination?* Students watch as the teacher models how to read to collect information, record the information on a sticky note, and share and record the information as a whole group on the Research about Bees: Class Notes. This highly scaffolded experience with research enables students to build confidence as they engage with a complex text to gather, share, and record information.
- In Work Time C, students begin to create scientific drawings based on images of bees. Students focus on “observing closely before drawing” and “drawing only what you see” as they sketch their own scientific drawings.
- Lessons 6–9 follow a similar structure to this lesson. Pay careful attention to the routines in this lesson to apply them in subsequent lessons.

How this lesson builds on previous work:

- In Lessons 2–4, students explored the text features in *What Is Pollination?*, read it for gist, and read it closely. In this lesson, students use the text to collect specific information about a pollinator: bees.
- As in previous lessons, students continue to use the What Researchers Do anchor chart to reflect on how they are building research skills.
- In the Closing, students continue to think about the habit of character of collaboration and reflect on their progress toward showing it.

Down the road:

- In Lessons 6–7, students will collect additional information about bees from images. In Lesson 7, students will sort the information they have collected.
- In Lessons 8 and 9, students will repeat the research cycle in small groups as they research another pollinator.
- In Lessons 6–9, students will continue to create scientific drawings of bees and other pollinators.

Additional Support:

- Some students may need additional support taking notes on the Research about Bees: Student Notes on page 6 of the Plants and Pollinators research notebook, Part II. Consider placing those students strategically close to the Research about Bees: Class Notes.

In advance:

- Pre-distribute Materials for Work Time A at student workspaces.
- Prepare bee images for Work Time C by printing them in color, if possible (see supporting Materials). Consider laminating them since students will use them again in Lessons 6–7.
- Post: Learning targets; “It’s Pollination Time,” Version 1; and applicable anchor charts (see Materials list).

Technology & Multimedia

Consider using an interactive white board or document camera to display lesson materials.

- Continue to use the technology tools recommended throughout Modules 1 and 2 to create anchor charts to share with families; to record students as they participate in discussions and protocols to review with students later and to share with families; and for students to listen to and annotate text, record ideas on note-catchers, and word-process writing.
- Record the whole group singing the “It’s Pollination Time” song and post it on a teacher webpage or on a portfolio app like Seesaw (<http://web.seesaw.me>) for students to listen to at home with families. Most devices (cellphones, tablets, laptop computers) come equipped with free video and audio recording apps or software.

Supporting English Language Learners

Supports guided in part by CA ELD Standards 2.I.B.6, 2.I.C.10, 2.I.C.12, 2.II.A.1, 2.II.B.4, and 2.II.B.5

Important points in the lesson itself

- The basic design of this lesson supports ELLs with opportunities to practice their research skills as a group by participating in a shared writing activity.
- ELLs may find it challenging to decipher some of the academic language and Vocabulary in *What Is Pollination?* Guide students through a Language Dive conversation to support comprehension.

- In Work Time A of this lesson, ELLs may participate in an optional Language Dive that guides them through the meaning of a sentence from *What Is Pollination?* The focus of this Language Dive is using adjectives to describe nouns (L.2.1e). Students then apply their understanding of the meaning and structure of this sentence as they take class notes about bees and as they write informational paragraphs for the Unit 2 Assessment. Preview the Language Dive Guide and consider how to invite conversation among students to address the language goals suggested under each sentence strip chunk (see supporting Materials). Refer to the Module 1 Appendix for additional information regarding a consistent Language Dive routine.

Levels of support

For lighter support:

- During Opening A, invite students to use different adjectives or adverbs to expand a phrase in “It’s Pollination Time.”

For heavier support:

- During Work Time A, distribute pre-written sticky notes or sticky notes with sentences frames to model and support student research.

Universal Design for Learning

- **Multiple Means of Representation (MMR):** In this lesson, students engage with the song, “It’s Pollination Time.” Some students may benefit from having an individual copy of the song to follow along in near-point as it is read aloud. Support transfer of learning by offering multiple representations of the poem. Consider providing an annotated or illustrated copy of the song for students as support for information processing strategy development and comprehension.
- **Multiple Means of Action & Expression (MMAE):** Continue to support students in setting appropriate goals for their effort and the level of difficulty expected.
- **Multiple Means of Engagement (MME):** During independent writing, some students may need examples of how to problem solve when they want to write a word with tricky spelling. Continue to emphasize sustained effort and process by modeling how to sound out a word with tricky spelling and demonstrate how to utilize environmental print to support spelling accuracy.

Vocabulary

Key:

(L): Lesson-Specific Vocabulary

(T): Text-Specific Vocabulary

(W): Vocabulary Used in Writing

New:

- adjective, adverb (L)

Review:

- nouns, verbs, research, scientific drawing (L)

Materials

- ✓ “It’s Pollination Time,” Version 1 (one to display)
- ✓ What Researchers Do anchor chart (begun in Unit 1, Lesson 2; added to during Work Time A; see supporting Materials)
- ✓ What Researchers Do anchor chart (begun in Unit 1, Lesson 2; example, for teacher reference)
- ✓ Unit 2 Guiding Question anchor chart (begun in Lesson 2)
- ✓ Research about Bees: Class Notes (new; co-created with students during Work Time B; see supporting Materials)
- ✓ *What Is Pollination?* (one per pair and one to display)
- ✓ Sticky notes (two to three per pair and one for teacher modeling)
- ✓ Pencils (one per student)
- ✓ Research about Bees: Class Notes (example, for teacher reference)
- ✓ Language Dive Guide II: *What Is Pollination?* (optional; for ELLs; for teacher reference)
 - Questions We Can Ask during a Language Dive anchor chart (begun in Unit 1, Lesson 8)
 - Language Dive Chunk Chart II: *What Is Pollination?* (for ELLs; for teacher reference)
 - Language Dive Sentence Strip Chunks II: *What Is Pollination?* (for ELLs; one to display)
 - Language Dive Note-catcher II: *What Is Pollination?* (for ELLs; one per student and one to display)
- ✓ Plants and Pollinators research notebook, Part II (from Lesson 1; pages 6–7; one per student and one to display)
- ✓ Plants and Pollinators research notebook, Part II (from Lesson 1; example, for teacher reference)
- ✓ Scientific Drawings anchor chart (new; teacher-created; see supporting Materials)
- ✓ Bee photographs #1 (enough for a third of the class and one for teacher modeling)
- ✓ Bee photograph #2 (enough for a third of the class)
- ✓ Bee photograph #3 ((enough for a third of the class)

Opening

A. Song and Movement: “It’s Pollination Time,” Version 1 (5 minutes)

- Invite students to the whole group area.
- Display **“It’s Pollination Time,” Version 1.**
- Invite students to raise their hand if they know the song “The Farmer in the Dell,” and share that this song is sung to that same tune.
- Model singing the chorus for students.
- Invite students to join in singing the remaining verses chorally.
- Using a total participation technique, invite responses from the group:
“What is this song about?” (bees and how they pollinate)

- Share that this song has many describing words in it, which will help students learn how to describe pollinators' bodies and how they move.
- Briefly review the definition of *nouns* and *verbs*. (a person, place, or thing; an action)
- Using a total participation technique, invite responses from the group:
“What nouns are in this song?” (bees, hive, garden, flowers, nectar, part, pollen, body, tree)
“What verbs are in this song?” (leave, go, grow, slurping, zig, zag)
- Pointing to the highlighted adjectives and adverbs in “It’s Pollination Time,” explain that writers use special words to describe, or tell more about, nouns and verbs.
- Define *adjective* (a word that describes a noun), and share that these are the words highlighted in yellow.
- Reread the first line, inviting students to listen for any adjectives.
- Using a total participation technique, invite responses from the group:
“What noun did you hear?” (bees)
“What words describe the bee?” (yellow and black)
- Confirm that yellow and black describe bees, so they are adjectives.
- Define *adverb* (a word that describes a verb), and share that these are the words highlighted in pink.
- Reread the second line, inviting students to listen for any verbs.
- Using a total participation technique, invite responses from the group:
“What verbs did you hear?” (slurping)
“What word describes how the bees were slurping?” (gently)
- Confirm that *gently* describes how the bees were slurping, so *gently* is an adverb.
- With excitement, share that tomorrow students will create motions for this song and learn more about adjectives and adverbs!

Meeting Students' Needs

- For ELLs: (Adjective Word Order) When identifying adjectives, point out that they almost always come before the nouns that they describe.
- For ELLs: (Acting Out Adverbs) Explain that adverbs explain how an action happens. Invite students to pretend they are bees slurping nectar *gently*. Then invite students to pretend they are slurping nectar *loudly*.
- For students who may need additional support with comprehension: Consider varied ways to represent the function of adjectives and adverbs. In addition to text, have students describe an object to highlight the adjective's relationship to the object, and describe a familiar action (e.g., running) to highlight the adverb's relationship to the verb. (MMR)

Work Time

A. Reading to Research Bees: *What Is Pollination?*, Pages 16–17 (15 minutes)

- Direct students' attention to the learning targets and read the first one aloud:
*“I can research information about bees using the text **What Is Pollination?**”*
- Review the definition of *research* (dedicated study of something to gain information about it or solve a problem).
- Direct students' attention to the **What Researchers Do anchor chart** and add a new bullet. Refer to the **What Researchers Do anchor chart (example, for teacher reference)** as necessary:
 - “Take notes to collect information.”
- Direct students' attention to the **Unit 2 Guiding Question anchor chart** and remind students that they have been working to answer this question:
 - “How do pollinators help plants grow and survive?”
- Share that today, students will complete research to answer this question:
 - “How do bees help plants to grow and survive?”
- Using a total participation technique, invite responses from the group:
“What new information did you hear in this question?” (bees)
- Remind students that they have been working to learn about the secret behind the fruits, flowers, and vegetables we enjoy—pollinators!
- Confirm that today, students will research by taking notes on how a specific pollinator, bees, help plants to grow and survive so we can enjoy fruits, flowers, and vegetables.
- Display the **Research about Bees: Class Notes** and read the three headings aloud:
 - “Why this pollinator is attracted to flowers”
 - “Body structures that support pollination”
 - “How this pollinator moves pollen”
- Display pages 8–9 of *What Is Pollination?*
- Model thinking aloud to find and record a note about how bees move pollen:
 - Say:
“I think this page might contain information about how this pollinator, the bee, moves pollen.”
 - Point to the photograph on page 8 and read the caption aloud: “This bee is cross-pollinating. It is carrying pollen from one flower to another of the same kind.”
 - Say:
“Yes! I heard information about how bees move pollen. I will make a note on my sticky note so I can remember it and share it with the group. I know that a note can be short, so I'll write just a few words.”
 - Write “carries to new flower” on a **sticky note**.
 - Place the sticky note on page 16 of *What Is Pollination?*, on top of the photograph, to show where the information is found.

- Share that students will now work with a partner to read pages 16–17 and look for information related to the first two columns of the Research about Bees: Class Notes.
- Move students into pre-determined pairs and transition them to their workspaces. Point out the sticky notes, **pencils**, and copies of *What Is Pollination?* already there.
 - Invite students to open to pages 16–17 of *What Is Pollination?* and begin reading to find information about “why bees are attracted to flowers” and “body structures that support pollination.” Remind students to write a word or phrase on their sticky note and place it where they found the information.
 - Circulate to support students and provide reminders and modeling of reading to locate information and/or taking a note.
 - After 6–7 minutes, refocus students whole group.
- Invite students to return to the whole group area, bringing their copies of *What Is Pollination?*, pencils, and sticky notes with them.

Meeting Students' Needs

- For ELLs: (Clarifying Headings) Clarify the meanings of the three headings on the Research about Bees: Class Notes. Invite students to rephrase them as questions. (Example: “Which parts of the bee’s body helps the pollination happen?”)
- For ELLs: During or after Work Time A, guide students through Day 1 of a two-day Language Dive. Refer to Day 1 of **Language Dive Guide II: *What Is Pollination?*** and **Chunk Chart II: *What Is Pollination?*** Distribute and display **Language Dive Sentence Strip Chunks II: *What Is Pollination?*** and **Language Dive Note-catcher II: *What Is Pollination?***
- For students who may need additional support with managing information: Provide sticky notes pre-written with the questions that students will use in recording their notes. (MMAE)

Work Time

B. Shared Writing: Research about Bees: Class Notes (15 minutes)

- Refocus students whole group.
- Turn and Talk:
 - “What information did you find about why bees are attracted to flowers?” (collect pollen and nectar to eat)***
 - “What information did you find about their body structures that support pollination?” (long tongues, hairy bodies)***
- If productive, cue students to explain why a classmate came up with a particular response:
 - “Who can explain why your classmate came up with that response?”***
- Referring to the Research about Bees: Class Notes, model taking a note:
 - Say:
 - “I took this note on page 8 of the text. I will reread it to help me remember: ‘carries to new flower’”***

- Say:
“Hmm ... what section does this note belong in? Why it is attracted to flowers? No. ‘Body structures that support pollination’? No. Oh! I know. This note belongs in the ‘How this pollinator moves pollen’ section.”
- Say:
“I’ll write the note on the chart in that section.”
- Say:
“I know a note should be short, only a few words, to capture my thinking.”
- Write the note in the “How this pollinator moves pollen” section.
- Invite students to share the notes they found. As students share out, clarify and capture their responses on the Research about Bees: Class Notes. Refer to the **Research about Bees: Class Notes (example, for teacher reference)** as necessary.
- Distribute students’ **Plants and Pollinators research notebooks, Part II**. Display Research about Bees: Student Notes on page 6 of the notebook and invite students to open to the same page.
 - Orient students to the directions on page 6. Share that now students will use the Research about Bees: Class Notes to copy the class notes about bees.
 - Invite students to begin copying the notes.
 - Circulate to support students and consider asking:
“What note are you recording?”
 - Continue to emphasize that notes are just words or phrases rather than complete sentences to help them remember. Refer to the **Plants and Pollinators Research notebooks, Part II (example, for teacher reference)** as necessary.
 - After 5–6 minutes, refocus whole group.

Meeting Students’ Needs

- For ELLs: (Irrelevant Information) Think aloud to provide non-examples of relevant information to each column. (Example: “This says there are 250 species of bumblebees. Hm ... does that tell me about body structures that support pollination?”)
- For students who may need additional support with fine motor skills: Offer choice with the student notes by providing a template that includes lines or additional space for each section. (MMR, MMAE)

Work Time

C. Scientific Drawing of Bees: Looking Closely to Draw (20 minutes)

- Direct students’ attention to the posted learning targets and read the second one aloud:
“I can create a scientific drawing of a bee.”
- With excitement, share that students will continue to build their research skills by creating a scientific drawing of a bee.

- Direct students' attention to the **Scientific Drawings anchor chart**.
- Remind students that a *scientific drawing* is a detailed and accurate picture that teaches the viewer information about an object, and it is based on observing or looking closely.
- Read the first two bullets on the Scientific Drawings anchor chart aloud:
 - “Observe closely before you begin drawing.”
 - “Draw only what you can see.”
- Confirm that it is important to do these things to create a detailed and accurate scientific drawing.
- Display **bee photograph #1** and model observing closely:
 - Study the bee photo quietly.
 - Trace the outline of the bee's body with your finger.
 - Say:
“I see that there is a bee in this photo. The bee is sitting on a yellow flower. I also see the bee's body parts: eyes, legs, and wings. I see some fuzzy hair on the bee's body.”
- Display page 7 of the Plants and Pollinators research notebook, Part II and model drawing only what you see:
 - Say:
“I'm only drawing what I can see. I see eyes, a body, legs, and wings.”
 - Draw a basic sketch of those body parts.
 - Say:
“I know the bee has a stinger, but I don't draw it because I can't see it in this photo.”
- Distribute copies of bee photograph #1, **bee photograph #2**, and **bee photograph #3** and invite students to look closely for 30 seconds. Prompt them to trace the outline of the bee's body to help them notice the shape.
- After 30 seconds, Turn and Talk:
“What do you notice when you look closely at your bee photo?” (Responses will vary, depending on the photograph.)
- Invite students to take their Plants and Pollinators research notebook, Part II and bee photo with them to their workspace.
- Invite them to open to page 7 and focus on the directions.
- After confirming that students will create a scientific drawing and write a sentence about what they learned about bees, prompt them to begin working.
- Circulate to support students and consider asking:
“What shapes and lines do you notice when you look closely at the bee in the photo?”
- After 5–6 minutes, signal students to stop working.
- Invite students to return to the whole group gathering area, bringing their Plants and Pollinators research notebook, Part II with them.

Meeting Students' Needs

- For ELLs: (Sentence Frames: Heavier Support) Provide sentence frames to support writing.
- For students who may need additional support with sustained effort: Increase mastery-oriented feedback by providing feedback that is frequent, timely, and specific to individual students. (Example: "I see you are looking closely at the photograph and have drawn the bee's body with great detail. What else do you see in the photograph that you want to include in your drawing?" (MME)

Closing and Assessment

A. Sharing Our Work: Scientific Drawings of Bees (5 minutes)

- Tell students that now they will share their scientific drawing and writing with a partner.
- Post and review the following directions:
- Describe what you noticed and drew in your scientific drawing.
 1. Read aloud your sentence.
 2. Answer clarifying questions.
- Invite students to turn to an elbow partner and take turns sharing their work.
- Circulate to support students and listen for them to share what they noticed, drew, and wrote with their partner.
- After 1-2 minutes, refocus students and give them specific, positive feedback on sharing their work.
- Preview tomorrow's work by sharing that students will continue to build their research skills as they use photographs to collect information about bees!

Meeting Students' Needs

- For students who may need additional support with organizing ideas for verbal expression: Provide an index card with steps to follow as students share with their partners. (MMAE, MME)