

Lesson 2: Making Observations: Discussing Connections in Related Plant Sets



CCSS

- **W.2.8:** Recall information from experiences or gather information from provided sources to answer a question.
- **SL.2.1:** Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
- **SL.2.3:** Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- **SL.2.6:** Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
- **L.2.4d:** Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., birdhouse, lighthouse, housefly; bookshelf, notebook, bookmark).



Daily Learning Targets

- I can describe the connection between seeds, plants, flowers, and fruits. (SL.2.1, SL.2.3)
- I can record information about seeds, plants, flowers, and fruits. (W.2.8, SL.2.6)

Ongoing Assessment

- After Work Time B, use page 2 of students' Plants and Pollinators research notebook to measure progress toward W.2.8.

Agenda

1. Opening

A. Engaging the Learner: What Researchers Do (15 minutes)

2. Work Time

A. Reading Aloud to Build Background Knowledge: *Plant Secrets*, Pages 1–26 (15 minutes)

B. Independent Drawing and Writing: Ordering the Stages of a Plant (20 minutes)

3. Closing and Assessment

A. Sharing Our Work: Plants and Pollinators Research Notebook (10 minutes)

Teaching Notes

Purpose of lesson and alignment to standards:

- Continue to nurture an inquiry-rich classroom environment by inviting students to ask questions and wonder about plant secrets and the stages of plants.

- During Opening B, students are introduced to the What Researchers Do anchor chart. In Work Time A, students ask questions, and share and discuss their ideas about *Plant Secrets* with each other.
- In Work Time A of this lesson, ELLs may participate in Day 1 of an optional two-day Language Dive that guides them through the meaning of a sentence from *Plant Secrets* using a new Language Dive format to be introduced to all students in greater detail during Lesson 8. Although students should briefly discuss all chunks in the Language Dive sentence, the new format invites them to slow down during one chunk to focus on a compelling language structure. The focus of this Language Dive is using knowledge of individual words to predict the meaning of compound words (L.2.4d). Students then apply their understanding of the meaning and structure of this sentence when recording information in their Plants and Pollinators research notebook and completing their unit assessment. Refer to the Module 1 Appendix for additional information regarding a consistent Language Dive routine. 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).
- During Work Time B, students engage in a drawing and writing activity to order the stages of plant development. Providing engaging and interactive experiences coupled with opportunities to speak, draw, and write about those experiences honors young learners' natural curiosity while building their language skills.

How this lesson builds on previous work:

- In Lesson 1, students were introduced to plant images related to five different plants (pumpkin, tomato, apple, carrot, pepper). In this lesson, students begin to recognize that all plants introduced in Lesson 1 have the same stages of development. Consider researching the names of these plants in the students' home languages. As students label their plant sets in their Plants and Pollinators research notebook, support them to label them in their home languages as well.
- This lesson is the second in a series of three that include built-out instruction for the use of Goal 4 Conversation Cues. Conversation Cues are questions teachers can ask students to promote productive and equitable conversation (adapted from Michaels, Sarah and O'Connor, Cathy. *Talk Science Primer*. Cambridge, MA: TERC, 2012. http://inquiryproject.terc.edu/shared/pd/TalkScience_Primer.pdf. Based on Chapin, S., O'Connor, C., and Anderson, N. [2009]. *Classroom Discussions: Using Math Talk to Help Students Learn, Grades K–6*. Second Edition. Sausalito, CA: Math Solutions Publications). Goal 4 Conversation Cues encourage students to think with other students to expand the conversation. Continue drawing on Goals 1–3 Conversation Cues, introduced in Modules 1–2, and add Goal 4 Conversation Cues throughout Modules 3–4 to more strategically promote productive and equitable conversation. Refer to the Module 1 Appendix for additional information on Conversation Cues. Consider providing students with a thinking journal or scrap paper.

Areas in which students may need additional support:

- In Work Time B, students may find sketching the stages of a plant development challenging. To minimize frustration, consider prompting students to focus on observing (looking closely) to find details in the images. Also, consider allocating additional time in the day for students to complete any unfinished drawings.

Down the road:

- The questions collected on the Student Questions anchor chart will be revisited at the beginning of Unit 2. In Lesson 3, students continue to use the Plant Frayer Model anchor chart and Plants and Pollinators notebook from this lesson to record and track their learning and work as researchers.

In advance:

- Prepare the plant set images in color, if possible.
- Preview the Plants and Pollinators research notebook to familiarize yourself with what will be required of students.
- The pages of *Plant Secrets* are not numbered. For instructional purposes, the page that begins with “These are seeds.” should be considered page 1 and all pages thereafter numbered accordingly.
- Preview the Language Dive Guide and consider how to invite conversation among students to address the questions and goals suggested under each sentence strip chunk (see supporting Materials). Select from the questions and goals provided to best meet your students’ needs.
- Pre-determine groups of three or four for Work Time B.
- Pre-distribute Materials for Work Time B in the whole group area.
- Post: Learning targets 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.

Supporting English Language Learners

Supports guided in part by CA ELD Standards 2.I.A.1 and 2.I.C.10

Important points in the lesson itself

- The basic design of this lesson supports ELLs with opportunities to engage academic content about the stages of plants using multiple language modalities: speaking, listening, reading, and writing.
- ELLs may find it challenging to decipher some of the academic language in *Plant Secrets*. Guide students through Day 1 of a two-day Language Dive conversation during or after Work Time A.

Levels of support*For lighter support:*

- In the Closing, invite students to use language from the Language Dive (optional for ELLs) to discuss their work in the Plants and Pollinators research notebook. (Example: If they get everything they need, tomato seeds can help tomato plants grow.)

For heavier support:

- During Work Time A, have students repeat each new word aloud that is added to the Frayer model (seed, plant, flower, fruit). Consider adding a movement to each word to help students remember each stage in the plant process and the sequence of the stages.
- During Work Time B, work closely with a group of students who need heavier support to complete their notebooks as a shared or interactive writing experience.

Universal Design for Learning

- **Multiple Means of Representation (MMR):** In this lesson, the habit of initiative is highlighted as something that researchers do. To maximize understanding and generalization, invite students to practice sharing the definition with a partner. Provide explicit feedback to ensure students have an accurate understanding of this word and its meaning.
- **Multiple Means of Action & Expression (MMAE):** For students who may need additional support with fine motor skills: Continue to vary methods for responses by offering options for writing tools. Support strategy development by modeling how to draw lines for words you intend to write. This will help students recall their original ideas throughout the writing process.
- **Multiple Means of Engagement (MME):** Throughout this lesson, students have opportunities to share ideas and thinking with classmates. Some students may need support for engagement during these activities, so encourage self-regulatory skills by helping them anticipate and manage frustration by modeling what to do if they need help from their partners. (Example: “I can remember when I’m sharing that if I forget my idea or need help, I can ask my partner to help me. My partner could help me by giving me prompts that will help me share my thinking.”) Consider offering sentence frames to strategically selected peer models. Offering these supports for engagement promotes a safe learning space for all students.

Vocabulary**Key:**

(L): Lesson-Specific Vocabulary

(T): Text-Specific Vocabulary

(W): Vocabulary Used in Writing

New

- seed, plant, fruit, flower (T)
- stage, compound word (L)

Materials

- ✓ Student Questions anchor chart (new; teacher-created; see supporting Materials)
- ✓ What Researchers Do anchor chart (new; teacher-created; see supporting Materials)
- ✓ *Plant Secrets* (one to display; for teacher read-aloud)
- ✓ Plant set images (one to display and one per group)
- ✓ Plants and Pollinators research notebook, Part I (one per student and one to display; page 2)
- ✓ Pencils (one per student)
- ✓ Plants and Pollinators research notebook, Part I (example, for teacher reference)
- ✓ Language Dive Guide I: *Plant Secrets* (optional; for ELLs; for teacher reference)
 - Language Dive Chunk Chart I: *Plant Secrets* (optional; for ELLs; for teacher reference)
 - Language Dive Sentence Strip Chunks I: *Plant Secrets* (optional; for ELLs; one to display)

Opening

A. Engaging the Learner: What Researchers Do (15 minutes)

- Direct students' attention to the **What Researchers Do anchor chart**.
- Focus students on the first line and read it aloud: "Researchers are curious and take initiative to learn about the world around them."
- Say:
"Initiative means 'I see what needs to be done and I do it.'"
- Remind students of the question they were introduced to yesterday: "How do we get the flowers, fruits, and vegetables we enjoy?"
- Explain that in this module, students will act as researchers and take initiative to learn by asking questions.
- Using a total participation technique, invite responses from the group:
"What questions do you have about how we get the fruits and vegetables we enjoy?" (Responses will vary, but may include questions such as: "How do seeds grow into plants?" "How does a plant turn into a vegetable?")
- As students share out, capture their questions on the **Student Questions anchor chart**.
- Share that they will search for the answers to these questions throughout the module.

Work Time

A. Reading Aloud to Build Background Knowledge: *Plant Secrets*, Pages 1–26 (15 minutes)

- Display the cover of *Plant Secrets*.
- Invite students to look closely at the illustrations on the cover.

- Ask:

“What do you notice?” (Responses will vary, but may include: leaves, plants, a pink flower, a magnifying glass)

- Invite students to focus on the magnifying glass and confirm that scientists use this tool to look closely at something. With excitement, share that this text will help students look closely at plants so they can learn about the secrets of how they grow.
- Write the words *seed*, *plant*, *flower*, and *fruit* on the board and invite students to read each word aloud chorally.
- Share that these words are important in this text. Invite students to listen closely to hear these words read aloud in the text.
- Still displaying the text, read aloud pages 1–26.
- Think-Pair-Share:

“What is Plant Secrets about?” (Responses will vary, but may include: the secret behind how plants grow, the secret inside of each plant part, plants growing into different parts)

- Confirm that this text is about how plants grow and shares the secret of plant growth.
- Direct students’ attention to the posted learning targets and read the first one aloud:

“I can describe the connection between seeds, plants, flowers, and fruits.”

- Turn and Talk:

“Based on what we learned about in Plant Secrets, what do you know about seeds, plants, flowers, and fruits?” (Responses will vary, but may include: Plants grow and become all of these things; these are parts of a plant.)

- If productive, use a Goal 4 Conversation Cue to encourage students to agree or disagree and explain why:

“Do you agree or disagree with what your classmate said? Why? I’ll give you time to think.”

Meeting Students’ Needs

- For ELLs: (Sequencing) Draw attention to the pattern in *Plant Secrets*: “Next come ____.” Have students chorally read this sentence in the book each time it comes up to practice sequencing the order of the stages. Tell them they will use these sentence frames, and this sequential order, as they draw and write in their Plants and Pollinators research notebook in Work Time B.
- For ELLs: (Summarizing the Target) Check for comprehension by asking students to summarize and then to personalize the learning targets. Ask:

“Can you put the learning target in your own words?” (I can tell how seeds, plants, flowers, and fruits fit together.)

“How do you feel about that target?” (I think I might already know the connection, but I’m not sure).
- 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 I: Plant Secrets** and **Language Dive Chunk Chart I: Plant Secrets**. Display **Language Dive Sentence Strip Chunks I: Plant Secrets**.

Work Time

B. Independent Drawing and Writing: Ordering the Stages of a Plant (20 minutes)

- Display the **plant set images** of the five related sets of the stages of plants (pumpkin, tomato, carrot, apple, pepper) from the previous day's sort.
- Invite students to whisper a response into their hand:
"What do you notice about the sort image sets?" (Responses will vary, but may include: I see the fruits and vegetables we sorted yesterday.)
- Display the cover of the **Plants and Pollinators research notebook, Part I**. Say:
"You will use the Plants and Pollinators research notebook throughout the unit to record ideas about plants. The information you record is important because you will be able to use the information to answer your research questions later on."
- Direct students' attention to the posted learning targets and read the second one aloud:
"I can record information about seeds, plants, flowers, and fruits."
- Turn and Talk:
"Where do you think you will record information today?" (Plants and Pollinators research notebook)
- Move students into pre-determined small groups.
- Assign each group a specific plant set and distribute assigned plant set images to each group.
- Distribute Plants and Pollinators research notebooks, plant set images, and **pencils**.
- Display page 2 and invite students to open their research notebooks to this page.
- Focus students on the directions and read them aloud.
- Define *stage* (the period in the development of plants as they grow).
- Using a total participation technique, invite responses whole group. Invite students to look back at the text if they can't remember the answers:
"What is the first stage of each plant?" (seed)
"What is the second stage of each plant?" (plant)
"What is the third stage of each plant?" (flower)
"What is the fourth stage of each plant?" (fruit)
- Invite all students to point to the first box in the sequence.
 - Turn and Talk:
"What did you notice about the shape of the seeds, plants, flowers, and fruits in the plant set images?" (Responses will vary, but may include: The seeds are round. The flower petals are shaped like triangles.)
 - Circulate and listen as students discuss, supporting and prompting students by telling students to observe the shapes closely.
- If productive, use a Goal 4 Conversation Cue to encourage students to add on to what a classmate said:
"Who can add on to what your classmate said? I'll give you time to think."
- Inform students that now they will have a chance to record the stages of the plant within each box. Instruct them to label each drawing with the word that describes the appropriate stage.

- Instruct each student to record the plant set name of his or her plant set. Refer to the **Plants and Pollinators research notebook, Part I (example, for teacher reference)** as necessary.
- Invite students to label each plant set in their home language or the home language of a classmate.

Meeting Students' Needs

- For ELLs and students who may need additional support with organizing their thinking for written expression: (Oral Processing) Invite students to orally share the stages of a plant with a partner before drawing and writing, using the pattern from the book. (Example: "First, there are _____. Next come _____. Next come _____. Next come _____.") Consider having students step to the side as they talk about this sequence, as they did with the laminated dots in Module 2. (MMAE)

Closing and Assessment

A. Sharing Our Work: Plants and Pollinators Research Notebook (10 minutes)

- Gather whole group.
- Direct students' attention to the What Researchers Do anchor chart and tell students that another way researchers take initiative is to share and discuss ideas.
- Point out to students that today, they took initiative as researchers by searching for the answer to the question: How do we get the fruits, veggies, and flowers that we enjoy?
- Remind students that they collected information in their Plants and Pollinators research notebook.
- Think-Pair-Share:
"What do you draw for your plant stage drawings on page 2 of your research notebook?"
(Responses will vary.)
- Tell students that they are on their way to finding the answer to the module guiding question. But first they need to understand how plants grown and survive.
- Tell students that they will build this understanding throughout this unit!

Meeting Students' Needs

- For students who may need additional support with motivation and sustained effort: Support students to provide each other with positive feedback. Before students share their Plants and Pollinators research notebook, foster community and collaboration by discussing how to give a compliment to a peer about her or his work. (MME)