

Lesson 3: Reading and Writing to Research: Living Things Need Food and Water



CCS Standards

- **RI.K.1:** With prompting and support, ask and answer questions about key details in a text.
- **RI.K.2:** With prompting and support, identify the main topic and retell key details of a text.
- **RI.K.3:** With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.
- **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text.
- **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).
- **W.K.8:** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question
- **L.K.1c:** Write a letter or letters for most consonant and short-vowel sounds (phonemes).



Daily Learning Targets

- I can read a text to research what makes something living. (RI.K.1, RI.K.1, RI.K.3, RI.K.4, RI.K.7)
- I can record information from my research about what makes something living. (W.K.8)

Ongoing Assessment

- During Reading Aloud to Research in Work Time A, continue to use the Reading Informational Text Checklist to track students' progress (see Assessment Overview and Resources).
- Collect students' Living Things research notebooks as evidence of progress toward W.K.8.

Agenda

1. Opening

- A. Poem and Movement: "What's Alive and What's Not?" Version 1 (10 minutes)

2. Work Time

- A. Reading Aloud to Research Living and Nonliving Things: *What's Alive?*, Pages 11, 13, and 20 (20 minutes)
- B. Engaging the Researcher: Making Observations (10 minutes)
- C. Independent Writing: Living Things Research Notebook (15 minutes)

3. Closing and Assessment

- A. Reflecting on Learning (5 minutes)

Teaching Notes

Purpose of lesson and alignment to standards:

- The Opening and Work Times A, B, and C all contain repeated routines from Lesson 2. Refer to that lesson for more detail as necessary.
- This is the first lesson in a series of three (Lessons 3–5) in which students focus in on one criterion from the Living Things Criteria anchor chart to research more closely. In this lesson, students research how all living things need food and water to give them energy. In this context, energy refers to the scientific understanding of the ability to do work, including growing and moving.
- Similar to Lesson 2, the observation activity during Work Time B is designed to provide each small group of students with plants to observe. If you are unable to provide enough plants per small group, consider completing the observation activity whole group with one set of plants and make adjustments to the instructional sequence as necessary or use the plant photographs (see supporting Materials).
- In Work Time B, students watch a 1-minute video embedded in the PBS Learning Media website, “What Do Animals Eat?” This video provides further examples and observations of how all living things have the same needs for food and water.
- In Work Time C, ELLs may participate in an optional Language Dive that guides them through the meaning of a sentence from page 13 of *What’s Alive?* using a new Language Dive Guide format to be introduced in greater detail during Lesson 5. The focus of this Language Dive is understanding and using an adverbial clause beginning with the conjunction *as*. Students then apply their understanding of the meaning and structure of this sentence when writing in their Living Things research notebook and throughout the remainder of the unit. Refer to the Module 1 Appendix for additional information regarding a consistent Language Dive routine.

How this lesson builds on previous work:

- In Lesson 2, students listened to pages 1–7 of *What’s Alive* read aloud. In this lesson, they listen to selected pages to focus their research on the pattern that all living things need food and water. Continue to reinforce the value of revisiting this rich and complex text to think about the important concepts and learn complex Vocabulary.
- In Lesson 2, students engaged in a shared reading of the Sorting Living and Nonliving Things anchor chart. In the Closing of this lesson (and Lessons 4–5), students work together to revise the Sorting Living and Nonliving Things anchor chart to show new student understandings.

Areas in which students may need additional support:

- During Work Time B, students observe how different living things meet their needs for food and water. They observe one plant that has been deprived of water and light and one healthy plant. To ensure there is no misunderstanding of the science, emphasize that plants and trees cannot eat and drink as we do, but that they take in water and nutrients from the soil through their roots and make their own food from sunlight through their leaves.
- Similar to Lesson 2, students independently write in the Living Things research notebook. Continue to consider any additional supports that may provide better access to the material (e.g., larger print) or aid students who continue to work on fine motor skills (e.g., providing varied writing tools, larger paper, or the option for dictation).

Down the road:

- In Lesson 4, “What’s Alive and What’s Not” Version 2 is introduced as students use new singular and plural nouns to create a new verse.
- In Lessons 4–5, students will continue to revisit the Sorting Living and Nonliving Things anchor chart to reflect their new learning. In Lessons 4–5, you should begin to reflect only accurate thinking on the anchor chart so as to have a completed and clear anchor chart by Lesson 6.
- In Lesson 4, students will continue observing different combinations of the live plants.

In advance:

- Strategically pair students for work during the Opening.
- Prepare:
 - Pieces of tape accessible on the edge of the board/table for students use to attach Singular and Plural Noun cards.
 - Living Things Word Wall cards for *nutrients*, *energy*, *roots*, and *wilt*.
 - Technology necessary to play “What Do Animals Eat?” in Work Time B.
 - Plant 1 and Plant 2 to observe and sketch in Work Time C.
- Follow care guide instructions in the Directions for Living Plants Observation Setup (see Lesson 1 supporting Materials).
- Distribute Materials for Work Time C at student workspaces.
- Preview the Language Dive Guide and consider how to invite conversation among students to address the language goals suggested under each sentence strip chunk (optional; see supporting Materials).
- Cut out the Language Dive Chunk Pictures I: What’s Alive for use during the Language Dive (optional; see supporting Materials).
- Post: Learning targets, “What’s Alive and What’s Not?” Version 1, and applicable anchor charts (see Materials list).

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

- Continue to use the technology tools recommended throughout Modules 1–2 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.
- Work Time B: Show “What Do Animals Eat?” video. WGBH. PBS Learning Media, 2003. Web. 6 September 2016. <<http://www.pbslearningmedia.org/resource/tdc02.sci.life.colt.eat/what-do-animals-eat/>>. (For display. Used by permission.)

Supporting English Language Learners

Supports guided in part by CA ELD Standards K.1.A.1, K.1.B.4, K.1.C.10, and K.1.C.12

Important points in the lesson itself

- The basic design of this lesson supports ELLs with opportunities to interact with text in multiple ways, including movement, visual engagement, oral processing, and whole class and partner discussion. Students also observe the criteria for living things in the natural world, offering an opportunity to practice and apply language in a hands-on experience.
- ELLs may find it challenging to retain and apply the concept of patterns between the living things in the text while grappling with the syntax and Vocabulary (both in the text and introduced in the learning targets). Consider pausing often to connect the illustrations to the text. (Example: “What things remain the same on pages 11, 13 and 20?”)

Levels of support

For lighter support:

- Offer opportunities for students to explain what their partner said during discussions. Before providing sentence frames or additional modeling throughout the lesson, ask students to share how they would respond to a prompt using a complete sentence.

For heavier support:

- During Work Time B, offer sentence starters for students struggling to express their ideas and encourage them to extend their thinking by explaining their thinking.

Universal Design for Learning

- **Multiple Means of Representation (MMR):** In this lesson, students engage with several resources for gathering information, including a text, photographs, and a video clip. Students then use this information to record an observation. This transfer of information into knowledge that students can use requires metacognitive skills and strategies. Some students may need support in connecting and remembering the information presented. Provide scaffolds to support diverse abilities in using these strategies, such as manipulatives to guide students in new understandings.
- **Multiple Means of Action & Expression (MMAE):** In this lesson, support a range of fine motor abilities and writing needs by offering students options for drawing utensils (e.g., thick markers or colored pencils) and writing tools (e.g., fine-tipped markers, pencil grips, slant boards). Varying tools for construction and composition supports students’ ability to express knowledge.
- **Multiple Means of Engagement (MME):** Sustained engagement and effort is essential for student achievement. Some students may need support to remember the goal of the work they are doing in this lesson. These students benefit from consistent reminders of learning goals and their value or relevance. Students who may struggle with sustained effort and concentration are supported when these reminders are built into the learning environment.

Vocabulary

Key:

(L): Lesson-Specific Vocabulary

(T): Text-Specific Vocabulary

New:

- singular, plural, criteria/criterion, nutrients, wilt (L)
- alike, energy, lap, nibble, sunlight (T)

Review:

- noun, revise, observe (L)

Materials

- ✓ What's Alive and What's Not" Version 1 (from Lesson 2; one to display)
- ✓ Singular and Plural Nouns anchor chart (new; co-created with students during the Opening)
- ✓ Singular and Plural Noun cards (one card per pair)
- ✓ Tape (one piece per pair)
- ✓ Singular and Plural Nouns anchor chart (answers, for teacher reference)
- ✓ *What's Alive?* (one to display; for teacher read-aloud)
- ✓ Living Things Criteria anchor chart (new; co-created with students during Work Time A; see supporting Materials)
- ✓ Living Things Criteria anchor chart (example, for teacher reference)
- ✓ Living Things Word Wall cards (new; teacher-created; three)
- ✓ Living Things Word Wall (begun in Lesson 1; added to during Work Time A; see Teaching Notes)
- ✓ What Researchers Do anchor chart (begun in Lesson 1)
- ✓ "What Do Animals Eat?" (video; play in entirety; see Technology and Multimedia)
- ✓ Plant 1 (from Lesson 2; one per small group)
- ✓ Plant 2 (one per small group)
- ✓ Plant photographs (optional; from Lesson 2; Plant 1 and Plant 2; one per small group)
- ✓ Living Things Research notebook (begun in Lesson 2; added to during Work Time C; page 2; one per student and one to display)
- ✓ Pencils (one per student)
- ✓ Crayons (class set; variety of colors per student)
- ✓ Living Things Research notebook (from Lesson 2; example, for teacher reference)
- ✓ Language Dive Guide I: *What's Alive?* (optional; for ELLs; for teacher reference)
 - Language Dive Chunk Chart I: *What's Alive?* (optional; for ELLs; for teacher reference)
 - Language Dive Sentence Strip Chunks I: *What's Alive?* (optional; for ELLs; one to display)
 - Language Dive Chunk Pictures I: *What's Alive?* (optional; for ELLs; one per student)
- ✓ Sorting Living and Nonliving Things anchor chart (begun in Lesson 2; manipulated during the Closing)

Opening

A. Poem and Movement: “What’s Alive and What’s Not?” Version 1 (10 minutes)

- Gather students whole group and tell them that they will revisit the poem “What’s Alive and What’s Not?” to continue thinking about living things and the specific words used in the poem.
- Briefly review the definition of *noun* (a person, place, or thing).
- Tell students that nouns can be *singular* (one person, place, or thing) or *plural* (more than one person, place, or thing). Invite students to wiggle one finger for the word *singular* and many fingers for the word *plural*.
- Follow the same routine established in Modules 1–2 to read the poem “**What’s Alive and What’s Not**” Version 1. Invite students to use the gestures for *singular* and *plural* to signal when they hear singular and plural nouns.
- Direct students’ attention to the **Singular and Plural Nouns anchor chart** and focus them on the labels *singular* and *plural*.
- Tell students that you have taken the nouns from the poem and written them on **Singular and Plural Noun cards**. Their job is to do the following to help create the anchor chart to use in future lessons:
 - With a partner, decide whether the noun is singular (hold up 1 finger) or plural (hold up many fingers). Look at the word and the pictures to help you decide.
 - Once you have decided, come up and tape the noun on the side it belongs: singular or plural.
- Draw students’ attention to the pieces of **tape** on the edge of the board and model how to take a piece and use it to attach the noun to the Singular and Plural Nouns anchor chart.
- Move students into pairs and distribute one Singular and Plural Noun card to each pair.
- Provide 2 minutes for students to talk and decide whether their noun is singular or plural. As needed, remind them to come up and tape their card to the Singular and Plural Nouns anchor chart. Refer to the **Singular and Plural Nouns anchor chart (answers, for teacher reference)** as necessary.
- Refocus students whole group and direct their attention to the completed Singular and Plural Nouns anchor chart.
- Using a total participation technique, ask:

“Looking at the nouns, how can we tell if a noun is singular or plural?” (It is plural if it ends in -s or -es.)
- Confirm students’ thinking that plural nouns end with an -s or -es. With excitement, tell students that they will continue learning about plural and singular nouns with the poem tomorrow.

Meeting Students’ Needs

- For ELLs and students who may need additional support with comprehension: (Color Coding: Plural Nouns) Consider using two different colors to trace or highlight nouns—one color for singular nouns and one color for plural nouns. Alternatively, invite students to trace or highlight just the -s or -es on plural nouns

with a particular color as you add words to the anchor chart. (Example: Use a blue highlighter to code the -s and -es.) Continue the color pattern throughout words on the Word Wall and in the classroom in general. Encourage students to notice the pattern. (MMR)

Work Time

A. Reading Aloud to Research Living and Nonliving Things: *What's Alive?*, Pages 11, 13, and 20 (20 minutes)

- Refocus whole group.
- Direct students' attention to the posted learning targets and read the first one aloud:

“I can read a text to research what makes something living.”
- Tell students that before they read to research what makes something living, they are going to read one page that will help them set up an anchor chart to use while reading aloud to research.
- Display page 11 of *What's Alive?* and read it aloud fluently and without interruption.
- Using a total participation technique, invite responses from the group:

“What does it mean if things are alike?” (They are the same.)
- Remind students that the author writes, “Living things are alike in certain ways.” That means that there are some things that are the same about all living things.
- Reread the sentence “All living things need water and food and air” and ask:

“In what three ways does the author tell us living things are alike?” (All living things need food, water, and air.)
- Display the **Living Things Criteria anchor chart** and define *criteria* as a test by which to decide something; for example, you might use a criteria to decide what toy to play with if it is raining or sunny. Tell students that when this Living Things Criteria anchor chart is complete, it will help us decide if something is living or nonliving.
- Direct students' attention to the Living Things Criteria anchor chart. Tell students that they are going to create this criteria list to record what all living things need. Since we just learned three things that all living things need, we are going to add them to the criteria list. Record *food*, *water*, and *air* on the list with accompanying icons. Refer to the **Living Things Criteria anchor chart (example, for teacher reference)** as necessary.
- Reread the final two sentences on page 11 and ask:

“What else do all living things need or do that is the same?” (They all need energy; they all move and grow.)
- Show students the **Living Things Word Wall card** for *energy* and follow the same process established in Modules 1–2: provide its definition (the ability to do work, including growing and moving), clap out its syllables, use it in a sentence, and place the Word Wall card and picture for it on the **Living Things Word Wall**.
- Direct students' attention to the Living Things Criteria anchor chart and add *move* and *grow* to the list with accompanying icons.

- Reread the Living Things Criteria anchor chart, focusing on food and water and modeling a signal for the criterion (e.g., pretend to spoon food into your mouth; pretend to drink from a cup).
- Remind students that they are researching to gather information and evidence to answer the unit guiding question: “How do we know if something is living?” Today they will focus on how all living things need food and water.
- Guide students through the routine from Work Time B of Lesson 2 to read aloud pages 13 and 20 of *What’s Alive?* As you read, invite students to use the signal for food and water as they listen.
 - Fluently read each page, pausing to:
 - Define in context the following words as you read them in the text: *lap* (to lick up with the tongue, as drink or food), *nibble* (to eat in small bites), and *sunlight* (the light of the sun).
 - When reading page 20, show students the Living Things Word Wall cards for *nutrients* (things in food that help people, animals, and plants live and grow) and *sunlight* and follow the same process established in Modules 1–2: provide their definitions, clap out their syllables, use them in a sentence, and place the Word Wall cards and pictures for them on the Living Things Word Wall.
 - Pause after each page and invite students to act out how the various living things need food and water.
 - Turn and Talk:
 - “**What evidence or information does this page tell us about how to know if something is living?**”
- After reading pages 13 and 20, ask:
 - “**Was anything the same about the (cat, bird, flower, and tree)?” (Yes, they all grow; they all need water; etc.)**
 - “**How do we know that cats and plants are living things?**” (They both need food and water.)
- Tell students that next they will observe more living things to gather more evidence to try to answer the unit guiding question: “How do we know that something is living?”

Meeting Students' Needs

- For ELLs and students who may need additional support with comprehension: (Connecting to Background Knowledge) Invite students to share other concrete situations in which they use criteria to make a decision and discuss the criteria for each situation. (Examples: I choose toys that roll to play with so I can move around; I need warm clothes during winter because it is cold.) (MMR)
- Before reading, provide white boards and dry-erase markers as an option for students to record (in drawing or writing) their ideas. This helps scaffold active listening for key details. (MMR, MMAE)
- For students who may need additional support with oral language and processing: Allow ample wait time during the discussion. (MMAE, MME)

Work Time

B. Engaging the Researcher: Making Observations (10 minutes)

- Refocus students whole group.
- Direct students' attention to the **What Researchers Do anchor chart** and read aloud the idea:

“observe closely”
- Remind students that to “observe closely” means to look at something carefully.
- Follow the routine from Work Time C of Lesson 2 to guide students through closely observing each of the following: **“What Do Animals Eat,” Plant 1, and Plant 2 (or plant photographs)**, to draw and write about them:
 - Prompt students to “look at the whole” and use the accompanying gesture.
 - Prompt students to “look from the bottom to the top” and use the accompanying gesture.
 - Prompt students to “look from side to side” and use the accompanying gesture.
 - Prompt students to “pick one spot and zoom in” and use the accompanying gesture.
 - Prompt students to “look again at the whole” and use the accompanying gesture.
- Before students observe Plant 2, tell them that it was not given any water or light.
- Turn and Talk:

“What did you observe about how living things need food and water?” (Responses will vary.)

“What was different about Plant 1, which did get water and light, and Plant 2, which did not get water or light?” (Responses will vary, but may include: When the plant didn’t get water, it looked dry, crunchy, and brown.)
- 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.” (Responses will vary.)
- Circulate and listen in as students share. Note students’ understanding of the pattern that all living things need food and water and follow up with any students who indicate misconceptions.
- Offer students specific, positive feedback on their close attention during the observation time.

Meeting Students’ Needs

- For ELLs: (Partner Share-Out) Invite students to share what their partners said to promote attentive listening, retelling, paraphrasing, and peer language modeling.
- For students who may need additional support with working memory: Invite students to record their observations (in drawing or writing) while they view the photographs and video clip. (MMAE)

Work Time

C. Independent Writing: Living Things Research Notebook (15 minutes)

- Refocus whole group.
- Direct students' attention to the posted learning targets and read the second one aloud:
"I can record information from my research about what makes something living."
- Display page 2 of the **Living Things research notebook**. Tell students that today they will select one of the two plants to record an observation about:
 - Plant 1 (the healthy plant)
 - Plant 2 (the unwatered and unhealthy, or *wilted*, plant).
- Show students the Living Things Word Wall card for *wilt* (to lose freshness and become limp) and follow the same process established in Modules 1–2: provide its definition, clap out its syllables, use it in a sentence, and place the Word Wall card and picture for it on the Living Things Word Wall.
- Follow the same routine from Work Time C of Lesson 2 to guide students through completing page 2 of their research notebook:
 - Tell students the following Materials are already at their workspaces: Living Things research notebook, *pencils*, and *crayons*.
 - Dismiss students to their workspaces, inviting them to safely and respectfully move like a living thing eating food or drinking water.
 - Invite students to begin working on page 2. Circulate to support students and refer to the **Living Things research notebook (example, for teacher reference)** as necessary.
 - After about 8 minutes, signal students to stop working and collect their notebooks.
 - Gather whole group.
 - Offer students specific, positive feedback on their drawing and writing of observations.

Meeting Students' Needs

- For ELLs: During or after Work Time C, guide students through the **Language Dive Guide I: What's Alive?** Refer to the **Chunk Chart I: What's Alive?** Display the **Language Dive I Sentence Strip Chunks I: What's Alive?** and distribute **Chunk Pictures I: What's Alive?**
- For ELLs and students who may need additional support in organizing for written expression: (Extrapolating from Drawing) Consider inviting students to draw their idea first, and then offer support by asking about details in their drawing. (MMAE)

Closing and Assessment

A. Reflecting on Learning (5 minutes)

- Display the **Sorting Living and Nonliving Things anchor chart**. Remind students that this chart shows their increasing understanding of living and nonliving things.

- Tell students that now that they have learned how all living things need food and water, they can use that information to *revise*, or make changes to, which things should be in the Living, Nonliving, or Not Sure Yet columns.
- Tell students that as they share today, they will practice using a new sentence frame to connect new information. Post and read aloud the sentence frame:
“This makes me think _____.”
- Model the sentence frame by asking a student to share aloud a revision he or she recommends for the Sorting Living and Nonliving Things anchor chart. (Example: Student says: “Move the airplane to Nonliving.” Teacher responds: “This makes me think the helicopter should also move to Nonliving because it is like an airplane.”)
- Using a total participation technique, invite responses from the group:
“What cards should move on this anchor chart? Why?” (Responses will vary, but may include: We should move the dog to Living because dogs need to eat food.)
- 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? I’ll give you time to think.” (Responses will vary.)
- Move the images to the different categories as instructed by students. (At this stage, student thinking may still reflect misunderstandings, which is okay. As students continue to gather more information and clarify their thinking, the anchor chart will become more accurate.)
- Invite students to reread the revised anchor chart with you and tell them that in the next lesson they will continue thinking about living things and another need they all have: the need to breathe.

Meeting Students’ Needs

- For ELLs: (Metacognition: Ways to Learn) Briefly facilitate a final round of Turn and Talk and ask students: “How did you do research today?” (Answers will vary, but may include: We observed videos, read text, engaged in discussion, wrote observations.)
- For ELLs: (Discussion Gestures: Connecting Ideas) To reinforce the frame “This makes me think _____,” invite students to use their index finger to tap their forehead three times. Tell students they can use this gesture with the frame to show they have new information to connect.