

Lesson 11: Close Reading: "Fossils and the Earth Long Ago"

Part 2



CCS Standards

- **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.2.6:** Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
- **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.2.1a:** 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).
- **SL.2.1b:** Build on others' talk in conversations by linking their comments to the remarks of others.



Daily Learning Targets

- I can use evidence from the text "Fossils and the Earth Long Ago" to answer questions about how fossils tell us about the earth long ago. (RI.2.1, RI.2.2, RI.2.6, W.2.8)
- I can make inferences about how the earth has changed by closely examining fossil pictures. (W.2.8, SL.2.1, SL.2.1a, SL.2.1b)

Ongoing Assessment

- At the end of Work Time A, collect students' "Fossils and the Earth Long Ago": Selected Responses Questions and use the Reading Informational Text Checklist (RI.2.1, RI.2.2, RI.2.3, RI.2.4, RI.2.5, RI.2.6) to track students' progress toward reading standards RI.2.1, RI.2.2, and RI.2.6 (see Assessment Overview and Resources).
- At the end of Work Time B, collect students' "Fossils and the Earth Long Ago": Selected Response Questions to monitor students' progress toward W.2.8.

Agenda

1. Opening

- A. Engaging the Learner: Reviewing Learning Targets (5 minutes)

2. Work Time

- A. Close Reading: “Fossils and the Earth Long Ago” (25 minutes)
- B. Constructing an Explanation: Using Clues to Make Inferences about the Earth Long Ago (20 minutes)

3. Closing and Assessment

- A. Sharing Our Work: What Was the Earth Like Long Ago? (10 minutes)

Teaching Notes

Purpose of lesson and alignment to standards:

- This lesson is the final lesson in which students practice reading texts independently before taking the unit assessment. In this lesson, students read the last paragraph of the text from Lesson 10 and answer a few selected response questions and one short answer question independently.
- In Work Time B, students apply the information they gained in the last paragraph of “Fossils and the Earth Long Ago” and use sets of pictures to make inferences about what the earth could have been like long ago.
- In the Closing, students create a title for their Fossil photograph and museum displays. This museum will display a lot of student learning from the unit. Before the lesson, prepare a space for the class to post their museum displays for visitors to read and admire.

How this lesson builds on previous work:

- In Lesson 10, students read the first two sections of the article entitled “Fossils and the Earth Long Ago” with a reading partner. They worked with their reading partner to answer the first set of text-dependent questions about this article.
- In previous lessons, students have practiced using evidence to make inferences. They will use this same skill today to make inferences about what the earth may have been like long ago by examining sets of pictures. This activity during Work Time B will reinforce students’ understanding of concepts found in the text “Fossils and the Earth Long Ago.”
- Continue to use Goal 1–3 Conversation Cues to promote productive and equitable conversation.

Areas in which students may need additional support:

- In Work Time A, students work independently to read through an article. For students who may need teacher-level support with reading, consider pulling a small group of students to read the text aloud to them. Consider prioritizing selected response questions to analyze and talk about together before having students answer them independently.

Down the road:

- In Lesson 12, students will take the Unit 2 Assessment. This unit assessment asks them to read a passage about fossils independently and answer selected response questions and one

short answer question. This lesson provides students with one more day of practice before they take the unit assessment, and will follow a similar structure as the assessment: The teachers reads aloud the text once as well as the selected response questions in front of students.

In advance:

- Preview the science activity in Work Time B to better support students as they make observations and inferences.
- 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.

- Work Time B: Create a slideshow of pictures sets #1 and #2.

Supporting English Language Learners

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

Important points in the lesson itself

- The basic design of this lesson supports ELLs with explicit instruction applying strategies for answering selected response questions and with opportunities to participate in task-based, authentic communicative exchanges.
- ELLs may find it challenging to comprehend and answer the short constructed response question at the end of the “Fossils and the Earth Long Ago”: Selected Response Questions. Help students unpack the language in the question by guiding them through a Mini Language Dive conversation in Work Time A (See Meeting Students’ Needs column for details.) Encourage students to use this strategy of “chunking” tricky sentences on their own as they complete the selected response and short constructed response questions in this lesson and on the Unit 2 Assessment.

Levels of support

For lighter support:

- The supports in this lesson and Lesson 10 are similar to the supports in Lessons 8–9 as the tasks mirror one another. Based on student performance in Lessons 8–10, consider releasing students from some of the supports applied in those lessons to foster independence and to assess student progress.

For heavier support:

- Work closely with a small group of students who need heavier support and guide them through each selected response question together. Support them as they read, paraphrase, and comprehend each question and response. Think aloud with them as they answer each question.

Universal Design for Learning

- **Multiple Means of Representation (MMR):** In order to facilitate effective learning during this lesson, ensure that all students have access to the directions in each session and feel comfortable with the expectations. Vary the ways in which you convey expectations for each activity or task. Consider engaging in a clarifying discussion about the directions and creating a visual display of the steps for the independent close reading.
- **Multiple Means of Action & Expression (MMAE):** In Work Time B, students record their observations and inference in writing. Support working memory by scaffolding organization of information. (Example: Offer partially filled-in sentence frames in their Paleontologist's notebook.)
- **Multiple Means of Engagement (MME):** Some students may require support with limiting distractions during the independent close reading. Support sustained effort by offering sound-canceling headphones or dividers between workspaces. Similarly, some students may require variations in time for reading, so consider offering pauses for stretching to encourage sustained effort.

Vocabulary

Key:

(L): Lesson-Specific Vocabulary

(T): Text-Specific Vocabulary

(W): Vocabulary Used in Writing

New:

- coral, sequoia tree (L)

Review:

- title, heading, gist (L)

Materials

- ✓ "Fossils and the Earth Long Ago" (from Lesson 10; one per student and one to display)
- ✓ Close Readers Do These Things anchor chart (begun in Module 1)
- ✓ Sticky notes (one per student)
- ✓ Strategies to Answer Selected Response Questions anchor chart (begun in Unit 1, Lesson 2)
- ✓ "Fossils and the Earth Long Ago": Selected Response Questions (from Lesson 10; one per student)
- ✓ Equity sticks (class set; one per student)
- ✓ Reading Informational Text Checklist (for teacher reference; see Assessment Overview and Resources)

- ✓ “Fossils and the Earth Long Ago”: Selected Responses Questions (from Lesson 10; answers, for teacher reference)
- ✓ Picture Set #1 (one to display)
- ✓ Picture Set #2 (one to display)
- ✓ Sentence Starters #1 (one to display)
- ✓ Sentence Starters #2 (one to display)
- ✓ Sentence Starters #3 (one to display)
- ✓ Paleontologist’s notebook (from Unit 1, Lesson 10; pages 13–14; one per student and one to display)
- ✓ Paleontologist’s notebook (from Unit 1, Lesson 10; example, for teacher reference)

Opening

A. Engaging the Learner: Reviewing Learning Targets (5 minutes)

- Gather students in the whole group meeting area.
- Direct students’ attention to the posted learning targets and read them aloud:

“I can use evidence from the text “Fossils and the Earth Long Ago” to answer questions about how fossils tell us about the earth long ago.”

“I can make inferences about how the earth has changed by closely examining fossil pictures.”
- Pause after each learning target to allow time for students to turn and talk to an elbow partner:

“What is one important word you hear in the target?”
- Tell students that today they will read the last part of “Fossils and the Earth Long Ago,” and then use this information to support inferences they make when they examine pictures.

Meeting Students’ Needs

- For students who may need additional support with perception and comprehension: Offer a sentence strip with each learning target to students who may need support with far-point display. (MMR)
- For ELLs: Check for comprehension by asking students to summarize and then to personalize the learning targets. Ask them to paraphrase them and then to say how they feel about them. Example:

“Can you put the first learning target in your own words?” (I can look at fossils and guess about how the earth might have changed.) “How do you feel about that target?” (I like pretending to be a detective!)

Work Time

A. Close Reading: “Fossils and the Earth Long Ago” (25 minutes)

- Tell students that they did such a good job yesterday of closely reading the first part of the text “Fossils and the Earth Long Ago.” Explain that yesterday they read and answered questions with a partner, but now they are ready to practice reading and answering questions on their own.
- Display “**Fossils and the Earth Long Ago**” and remind students that they read the first two sections yesterday: “Rock Layers” and “Learning from Fossils.” Today, they will independently read the final section, “Earth Long Ago.”
- Direct students’ attention to the **Close Readers Do These Things anchor chart** and review the steps about reading the text and determining the gist.
- Distribute **sticky notes**. Tell students that you will read the final section aloud. As you do, they should write down the gist of this section on their sticky note.
- While still displaying “Fossils and the Earth Long Ago,” read the third section aloud.
- Invite students to turn and talk to an elbow partner:
“What was the gist of this section?” (how fossils can tell us how the earth has changed)
- Ensure students recognize that this section is how fossils can tell us about changes in the earth or what the earth was like a long time ago.
- Tell students that as they read the last section, “Earth Long Ago,” they should use those same strategies.
- Distribute “Fossils and the Earth Long Ago” and invite students to return to their workspaces and begin reading. Circulate to support students as needed. If students get stuck on a word, encourage them to look for spelling patterns they recognize.
- After about 5–6 minutes, refocus whole group.
- Invite students to Think-Pair-Share with an elbow partner:
“What is one new detail you learned from this section?” (The earth has changed a lot, like there may have been an ocean or sea where there are mountains today.)
- Tell students they will now answer some selected response questions about the third section of the article.
- Guide students through the routine established in Lesson 9 to answer questions #7–10, including the short constructed response:
 - Review the **Strategies to Answer Selected Response Questions anchor chart**.
 - Invite students to retrieve “**Fossils and the Earth Long Ago**”: **Selected Response Questions**.
 - Read questions #7–10 aloud.
 - Invite students to answer questions #7–10 independently. Point out to students that the last question asks students to draw and write their thinking about the answer.
 - Circulate to support students as needed. Encourage them to refer to the Strategies to Answer Selected Response Questions anchor chart as they are working with their partners. Consider using the **Reading Informational Checklist** to gather data on students’ progress toward RI.2.1, RI.2.2, and RI.2.6.

- After about 10–12 minutes, refocus whole group.
- Use **equity sticks** to select students to share out their answers for questions #7–10 and clarify any misconceptions. Refer to the **“Fossils and the Earth Long Ago”: Selected Responses Questions (answers, for teacher reference)** as necessary.
- Collect students’ “Fossils and the Earth Long Ago”: Selected Response Questions.

Meeting Students’ Needs

- To enhance students’ capacity for monitoring progress as you review the Close Readers Do These Things anchor chart, invite student input on how they think the class is doing with applying these strategies. (MMAE)
- For ELLs: Mini Language Dive. Ask students about the meaning of chunks from the short constructed response question from the “Fossils and the Earth Long Ago”: Selected Response Questions: “According to the article / what can we learn from studying fossils? / Below, show one thing / we can learn from studying fossils. / Draw a picture / and write a sentence about it.” Write and display student responses next to the chunks. Examples:
 - “What is this question asking you to do?” (Responses will vary.)**
- Point to and read aloud the chunk: “According to the article” and ask:
 - “What is this chunk about?” (the article “Fossils and the Earth Long Ago”)**
 - “What does the phrase according to mean?” (Using the information in the article)**
- Point to and read aloud the chunk: “what can we learn from fossils?” ask:
 - “Now we know we have to use the information in the article. What will we use the information in the article to find out?” (what we can learn from fossils)**
- Point to and read aloud the chunk: “Below, show one thing” and ask:
 - “What is the question asking you to do?” (show something)**
 - “How many things will you show?” (one)**
 - “Where will you show the one thing?” (below; in the box and lines under the question)**
- Point to and read aloud the chunk: “we can learn from studying fossils.” and ask:
 - “We know we are showing something in this box and on the lines. What is more information about the one thing the question wants us to show?” (It should be something we can learn from studying fossils.)**
- Point to and read aloud the chunk: “Draw a picture” and ask:
 - “How will we show the one thing that we can learn from fossils, using information from the article?” (by drawing)**
- Point to and read aloud the chunk: “and write a sentence about it.” and ask:
 - “How else will we show the one thing that we can learn from fossils, using information from the article?” (by writing a sentence about it)**
 - “Now what do you think this question is asking you to do?” (Draw a picture and write a sentence about one thing we can learn from fossils, using information in the article.)**

Work Time

B. Constructing an Explanation: Using Clues to Make Inferences about the Earth Long Ago (20 minutes)

- Gather students back in the whole group meeting area.
- Say:

“Fossils and the Earth Long Ago,” and the section with the heading, ‘Earth Long Ago,’ told us that Paleontologists study fossils from long ago to learn about what the earth was like a long time ago.”
- Tell students they will now practice making *inferences* about what the earth was like long ago by studying different pictures of fossils. Remind students that an *inference* is an idea based on evidence or observations.
- Direct students’ attention to the posted learning targets and read the second one aloud:

“I can make inferences about how the earth has changed by closely examining pictures of fossil.”
- Tell students that pages 13 and 14 in their **Paleontologist’s Notebook** two sets of pictures: One picture is of a fossil of a plant or animal, and the other picture is of a similar plant or animal in its natural habitat, or the place it lives in the wild.
- Display **picture sets #1** and **#2**. Tell students that these same pictures are in their Paleontologist’s notebooks. Tell students that you are going to guide them through the following process:
- Examine the first picture with your reading partner to make observations where the fossil was found.
- Examine the second picture to make observations about where the living thing is supposed to live.
- Use evidence from both pictures to make an inference about what that place on earth was like a long time ago.
- Focus students on picture set #1 and point to the first picture. Tell students that this is a picture of a fossil that is *coral*. Explain to students that coral is a living thing or an animal that lives in the ocean.
- Display **Sentence Starter #1** and ask:

“What do you observe about the first picture and where the fossil is?” (I notice it is on top of rock. I notice there are lots of rocks and dirt around it.)
- Display **Sentence Starter #2** and ask:

“What do you observe about the second picture and where this is living in its natural habitat?” (“I notice that the living thing is in a place that is in deep water.”)
- Display **Sentence Starter #3** and ask:

What inference can you make about the earth was like a long time in this place?” (I can infer that in this place a long time ago, the earth was underwater. I infer that the earth in this place was different long ago because there was an ocean.)
- Focus students on picture set #2 and point to the second picture. Tell students that this is a type of tree called a *sequoia tree*. Tell students that sequoia trees’ natural habitats are forests.

- Take students through a similar process to make an inference about what the earth was like a long time ago using this picture set and the sentence starters.
- Tell students that they just worked hard to make an inference about what the earth was like long ago. Now they will write their observations and inferences in their **Paleontologist's notebook**.
- Display pages 13–14 in a Paleontologist's notebook. Point out that the sentence starters in the book are the same sentence starters that they just used with their partners.
- Tell students that they will now choose one of the picture sets on page 13 or 14. Using these pictures, they will record their observations and inference in writing, just like a Paleontologist would.
- Release students back to their workspaces and invite them to open to pages 13 and 14 in their Paleontologist's notebook.
- Tell students to point to the picture set for the observation and inference they will record.
- Once each student has chosen a picture set, invite students to fill in either page 13 or 14 in their Paleontologist's notebook.
- Circulate to support students as necessary. Encourage them to name specific evidence from the photographs to support their inference as well as using the Interactive High-Frequency Word Wall to spell tricky words. Refer to the **Paleontologist's notebook (example, for teacher reference)** as necessary.

Meeting Students' Needs

- For students who may need additional support with oral language and processing: Allow ample wait time as students prepare their thinking for sharing orally. (MME, MMAE)
- For ELLs: Support students in successfully using the sentence starters to make inferences. Think aloud inferring how the earth may have looked long ago. (Examples: "Hmm. I notice the fossil of a fish is in a dry and rocky place. I notice that the living thing lives in the ocean. How can that be? Could it be that this part of earth was an ocean long ago? How can I say that using sentence starter #3?")
- For ELLs: As students complete pages 13 and 14 of their Paleontologists' notebooks, invite them to use the sentence starters #1–3 in their writing.

Closing and Assessment

A. Sharing Our Work: What Was the Earth Like Long Ago? (10 minutes)

- Invite students back to the meeting area and remind them to bring their Paleontologist's notebook with them.
- Tell students that now they are going to share some of their inferences with the class.
- Display picture set #1. Invite students who recorded their observations and inferences about this set on page 13 of their Paleontologist's notebook to raise their hand.
- Ask students with their hands raised:

***"What inference did you make about what earth was like long ago using these pictures?"
(I inferred that, in this place, the earth was underwater in that place.)***

- If productive, use a Goal 3 Conversation Cue to encourage students to provide evidence:
- “What, in the pictures, made you think so?” (Responses will vary.)
- Invite a few students to share out. If necessary, confirm that we can infer that there may have been an ocean in this place, not land! This is because a fossil of coral was found there, and we know that corals live in the ocean. Emphasize to students that the evidence from the picture helped us make this inference.
- Repeat this process with picture set #2. (I inferred that this place used to be a forest with lots of trees.)
- Invite a few students to share out. If necessary, confirm that we can infer that there may have been a forest here, not a desert! This is because a fossil of trees were found here, and we know that this kind of tree lives in the forest. Again, emphasize to students that the evidence from the picture helped us make this inference.
- If productive, use a Goal 3 Conversation Cue to challenge students:
“Can you figure out why paleontologists want to learn so much about the earth long ago? I’ll give you time to think and discuss with a partner.” (Responses will vary.)
- Give students specific, positive feedback on being paleontologists and thinking about what the earth was like a long time ago, and changes to the earth that have happened.

Meeting Students' Needs

- To create an accepting and supportive classroom environment before a student shares, encourage students to respect the student’s work and willingness to take a risk by sharing her or his ideas with the whole class. Say:
“Sharing your ideas with the whole class can feel a little risky, so we want to be respectful of everyone’s effort.” (MME)