

Lesson 7: Writing and Speaking: Close Read-aloud Culminating Task and Science Talk



CCS Standards

- **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.
- **SL.2.1c:** Ask for clarification and further explanation as needed about the topics and texts under discussion.



Daily Learning Targets

- I can order and describe the steps of fossilization. (W.2.8)
- I can use discussion norms to participate in a Science Talk about fossils. (SL.2.1a, SL.2.1b, SL.2.1c)

Ongoing Assessment

- At the end of Work Time A, collect students' *Fossils* Culminating Task Sheet #1 and use it to track their progress toward W.2.8.
- During Work Time B, circulate and observe as students engage in their first Science Talk. Monitor their ability to follow the Science Talk protocol, providing reminders about appropriate participation as needed.
- During the Closing, collect copies of Exit Ticket: Selected Response #5 and use it to track students' progress toward RI.2.1 and RI.2.5.

Agenda

1. Opening

- A. Engaging the Learner: Fossilization Picture Cards (5 minutes)

2. Work Time

- A. Close Read-aloud: Culminating Task (25 minutes)
- B. Science Talk: "What Can We Learn from Studying Fossils?" (25 minutes)

3. Closing and Assessment

- A. Exit Ticket: Selected Response #5 (5 minutes)

Teaching Notes

Purpose of lesson and alignment to standards:

- In this lesson, students complete the close read-aloud culminating task and participate in the Science Talk protocol. The purpose of these activities is to help them synthesize what they have learned about fossils thus far. In the culminating task, students synthesize the evidence gathered through the close read-aloud about fossilization. In the Science Talk, students synthesize the evidence they have gathered in their paleontologist's notebooks to answer the question: "What can we learn from studying fossils?"
- During Work Time B, students are introduced to a new protocol: Science Talk. During this lesson, students will participate in a simplified version of this protocol. (In 2M3, students will use the full protocol.) Although this protocol is used in kindergarten and first grade, in second grade the protocol becomes more advanced to support students' engagement in more sophisticated conversation.
- During this Science Talk, students discuss one of the Unit 2 guiding questions: "What can we learn from studying fossils?" A familiar question was selected so that students have some background knowledge about it and can focus on participating in the protocol appropriately.
- Although it is similar to a Collaborative Conversation, a Science Talk is focused on answering a science-related question. These talks provide a window into students' thinking that helps teachers to figure out what students really know and what their misconceptions may be. Consider how familiar students are with this protocol and reallocate class time spent introducing it as necessary.

How this lesson builds on previous work:

- In the Closing, students again use strategies from the Strategies for Answering Selected Response Questions anchor chart to answer a question on the Exit Ticket: Selected Response #5. Building confidence in using strategies to answer these questions is important for students' success on the Unit 2 Assessment in Lesson 12.
- Continue to use Goal 1–3 Conversation Cues to promote productive and equitable conversation.

Areas in which students may need additional support:

- For some students, the culminating task may require more than the 25 minutes allotted. Consider providing additional time if necessary. Students with fine motor challenges may need assistance cutting out the steps of fossilization on the *Fossils* Culminating Task Sheet #1. Consider pre-cutting the pictures for those students.
- Some students may find the Science Talk protocol challenging. Consider pairing those students with a capable partner during the Science Talk and allowing them to share notes when answering the question.

Down the road:

- In Lessons 8–11, students will begin reading texts about fossils independently and answering selected response questions about those texts as they prepare for the Unit 2 Assessment.
- In Lesson 8, students will be introduced to a new protocol: Interactive Word Wall.

- In Lesson 8, students will engage in a sorting activity that requires some preparation that you may want to begin earlier. See the preparation directions for the Sorting Different Types of Fossils Activity in the Teaching Notes of Lesson 8 for more information.

In advance:

- Prepare the fossilization picture card sets by creating a set for each pair of students (see supporting materials). Copy, cut apart, and shuffle the cards in each set. Place them near the whole group area for use in the Opening.
- Preview the close read-aloud culminating task in Work Time A to familiarize yourself with what will be required of students.
- Create small groups of four or five students for the Science Talk, as well as a discussion space for each group.
- Distribute:
 - Materials for Work Time A at student workspaces to ensure a smooth transition.
 - Paleontologist's notebooks to each Science Talk group's discussion space, so group members can each access their paleontologist's notebook during the Science Talk.
- Review the Science Talk protocol. (Refer to the Classroom Protocols document for the full version of the protocol.) Additionally, watch the "Science Talk Protocol" video to prepare for Work Time A (<https://vimeo.com/channels/eleducationk5curriculum>). If time allows, consider showing the video to students to prepare them for the Science Talk.
- 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: Video-record students during the Science Talk to watch later to evaluate strengths and areas for improvement. Post it on a teacher web page or on a portfolio app—for example, Seesaw (<http://web.seesaw.me>)—for students to watch at home with their 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.A.1 and 2.I.C.10

Important points in the lesson itself

- The basic design of this lesson supports ELLs with opportunities to participate in a Science Talk protocol. This will foster content knowledge and English language development through peer interaction.

- ELLs may find sentence frames such as “I would like to add onto ____’s idea with new details” challenging to use. Consider providing additional modeling and think-alouds for using each sentence frame during the Science Talk protocol. Invite students who need lighter support to model using the sentence frames with students who need heavier support.

Levels of support

For lighter support:

- During the Science Talk protocol in Work Time B, encourage students to use Goal 1–3 Conversation Cues with other students to extend and deepen conversations, think with others, and enhance language development. (Example: “Can you give an example?”)

For heavier support:

- During Work Time A, distribute a partially filled-in copy of Culminating Task Sheet 1, with some of the sentences complete. This will provide students with models for the kind of information they should enter, while relieving the volume of writing required. Refer to Culminating Task Sheet 1 (example, for teacher reference) to determine which sections of the task sheet to provide for students.
- During the Science Talk protocol in Work Time B, provide students with individual copies of the Science Talk Protocol anchor chart. In their groups, students can follow along by placing a finger on each step as it occurs. While circulating, ensure that students are following along accurately.

Universal Design for Learning

- **Multiple Means of Representation (MMR):** In this lesson, students are introduced to the Science Talk protocol. When introducing this protocol, guide their information processing by inviting student volunteers to help model what it looks like and sounds like.
- **Multiple Means of Action & Expression (MMAE):** In this lesson, individual students are asked to share ideas with the whole group. As students share out, provide options for expression and communication by using sentence frames. (Examples: “I think I did well at ____ during the Science Talk.” “I grappled with ____ during the Science Talk.”)
- **Multiple Means of Engagement (MME):** During the Closing, give students specific, positive feedback on their hard work and effort for the day. To foster a sense of community and provide options for physical action, invite students to give themselves a special applause and “kiss” their brain for such great thinking.

Vocabulary

Key:

(L): Lesson-Specific Vocabulary

(T): Text-Specific Vocabulary

(W): Vocabulary Used in Writing

New:

- order (L)

Materials

- ✓ Fossilization anchor chart (begun in Lesson 4)
- ✓ Fossilization picture card sets (one for teacher modeling and one set per pair)
- ✓ *Fossils* Culminating Task Sheet #1 (one per student)
- ✓ *Fossils* Culminating Task Sheet #2 (one per student)
- ✓ Scissors (one per student)
- ✓ Glue sticks (one per student)
- ✓ Pencils (one per student)
- ✓ *Fossils* Culminating Task Sheet #1 (answers, for teacher reference)
- ✓ Classroom Discussion Norms anchor chart (begun in Module 1)
- ✓ Paleontologist's notebooks (from Unit 1, Lesson 10; one per student)
- ✓ Paleontologist's notebook (from Unit 1, Lesson 10, example, for teacher reference)
- ✓ Science Talk Protocol anchor chart (new; teacher-created; see supporting materials)
- ✓ Unit 2 Guiding Questions anchor chart (From Lesson 1; one to display)
- ✓ Conversation starters (one to display)
- ✓ Strategies for Answering Selected Response Questions anchor chart (begun in Unit 1, Lesson 2)
- ✓ Exit Ticket: Selected Response #5 (one per student)

Opening

A. Engaging the Learner: Fossilization Picture Cards (5 minutes)

- Gather students in the whole group meeting area.
- Direct students' attention to the posted learning targets and read the first one aloud:
"I can order and describe the steps of fossilization."
- Underline the following words and reread the learning target aloud:
"I can order and describe the steps of fossilization."
- Explain that these two verbs, or actions, tell what students will do to show their learning about fossilization.
- Define *order* (to put in order; organize).
- Confirm that this target means that students will arrange the steps of fossilization in the correct order and then *describe*, or tell about, each step.
- Briefly review the **Fossilization anchor chart**, confirming that the five steps happen in a certain order that does not change.
- Introduce the **fossilization picture card set** by displaying the cards, in the correct order of Steps 1–5, where students can see them.
- Share that these cards contain pictures and words to describe the steps of fossilization.
- Shuffle the fossilization picture card set and tell students they will work in pairs to correctly order the steps. After the cards are in the correct order, partners should take turns describing

what happens in each step. Share that students may use their own words to describe the steps, or they may read from the cards if needed.

- Distribute fossilization picture card sets and invite students to begin ordering and describing the steps. As students work, circulate and help as needed to clarify any confusion about the correct order of steps. Encourage students to use complete sentences to explain what happens during each step.
- After 2–3 minutes, refocus students whole group and collect the fossilization picture card sets.

Meeting Students' Needs

- To create an accepting and supportive classroom climate, involve students in a discussion about what *respectful* disagreement means. Reinforce the idea that disagreement can be positive and productive. (Example: "If my partner disagrees with my idea, that is okay. It does not mean that my classmate does not like me or does not appreciate my ideas. It just means my classmate had a totally different idea than me! My partner and I can learn from each other's ideas.") (MME)
- For ELLs: Consider pairing students with a partner who has more advanced or native language proficiency. The partner with greater language proficiency can serve as a model in the pair, initiating discussions and guiding their partner through the activity.

Work Time

A. Close Read-aloud: Culminating Task (25 minutes)

- Transition students back to their workspaces.
- Encourage students by saying that they have learned a lot about the steps of fossilization, and now is the opportunity to show what they have learned!
- Remove the Fossilization anchor chart and fossilization picture card sets from students' view.
- Point out **Fossils Culminating Task Sheet #1**, already at students' workstations, and invite them to each take a sheet. Focus students on the directions and read them aloud:
"Cut and paste the pictures of the steps of fossilization in the correct order. Then, add a sentence to describe what happens during each step."
- Point out the pre-distributed **Fossils Culminating Task Sheet #2** and invite students to each take a sheet. Share that these pictures show the steps of fossilization. Tell students they will cut out and glue one picture into each box on Fossils Culminating Task Sheet #1.
- Remind students that the steps must be in the correct order.
- Direct students to complete the task independently using the **scissors, glue sticks, and pencils** at their workstations.
- As students work, circulate and reread or clarify the directions as needed. Refer to the **Fossils Culminating Task Sheet #1 (answers, for teacher reference)** as necessary.
- After 15–20 minutes, signal students to stop. Collect both task sheets and instruct students to clean up the other materials at their workspace.
- Invite students to transition to the whole group meeting area.

Meeting Students' Needs

- For students who may need additional support with fine motor skills: Offer pre-cut fossil cards. (MMR, MMAE)
- For ELLs: Some students may grapple with composing sentences describing the fossilization process. Direct them to the Fossilization anchor chart and the language from the Language Dive and Mini Language Dives from the unit. For heavier support, provide sentence frames for each step, or provide students with the Fossilization picture cards to use as models.

Work Time

B. Science Talk: “What Can We Learn from Studying Fossils?” (25 minutes)

- Direct students’ attention to the posted learning targets and read the second one aloud:
“I can use discussion norms to participate in a Science Talk about fossils.”
- Explain that a Science Talk is a protocol and will feel similar to a Collaborative Conversation, but the whole discussion will be about science! Share that the purpose of a Science Talk is to discuss an important science question with your classmates and use evidence to support your answers to the question.
- Remind students that they have been learning how to participate in discussions with their classmates responsibly by following the norms on the **Classroom Discussion Norms anchor chart**. Briefly review the norms.
- Tell students they will use these norms during today’s Science Talk. Remind them that the purpose of a Science Talk is to discuss the possible answers to an important science question. Emphasize that a Science Talk often happens in small groups, and today you will guide all groups through the steps together.
- Move students into groups for the Science Talk and remind them to bring their **paleontologist’s notebooks** with them.
- When all groups are seated, focus students’ attention on the **Science Talk Protocol anchor chart**.
- Read the first step on the Science Talk Protocol anchor chart aloud:
 1. “Face your small group members. Label who is A, B, C, and D.”
- Invite students to complete this step. If needed, assign one student in each group to be A and direct the others to follow clockwise around the group.
- Read the second step aloud:
 2. “Listen to the teacher announce the question or prompt.”
- Remind students that the question in a Science Talk will always be an important science question.
- Display the **Unit 2 Guiding Questions anchor chart** and read the first guiding question aloud: “What can we learn from studying fossils?”
- Assure students that they will have a few minutes to think about how to answer this question.
- Read the third step aloud:
 3. “Consult your notes for evidence to answer the question.”

- Review the definition of *evidence* (something that gives proof of or a reason to believe something).
- Share that some examples of evidence are information from a text or an observation.
- Remind students that they have a valuable resource full of evidence to help them answer this science question: their paleontologist's notebook!
- Invite students to look through their paleontologist's notebook for evidence to help them answer the question. If needed, reread Unit 2 guiding question #1.
- Allow students 1–2 minutes to look through their paleontologist's notebook quietly.
- Refocus students whole group and read Steps 4 and 5 aloud:
 4. "One group member answers the question."
 5. "Using notes and ideas, take turns responding using a conversation starter."
- Remind students that they have used conversation starters before, during the Collaborative Conversation protocol.
- Read each **conversation starter** aloud. Emphasize that the first conversation starter, "I think ____ because ____" is a good way to share an answer to the question and support it with evidence from the paleontologist's notebook.
- Remind students that all of these conversation starters can be used to help them talk to one another as they answer the question.
- Invite groups to choose one member to begin the discussion by answering the question. Remind students that after one group member answers, others may take turns responding using the conversation starters.
- Allow groups 7–10 minutes to engage in the Science Talk protocol. As they discuss, circulate and provide reminders about specific classroom discussion norms and behaviors on the Science Talk Protocol anchor chart as needed. Also, listen for students to answer the question using evidence from their paleontologist's notebook. (Responses will vary, but may include: Studying a fossil closely will tell you it used to live a long time ago, it is no longer alive, it is old, it represents something that used to be alive; studying a fossil closely will tell you about its shape, size, and textures; the steps of fossilization can teach you that fossils form over a long period of time, are very old, and can help us to understand that the earth's surface has changed.)
- If productive, use a Goal 3 Conversation Cue to encourage students to provide evidence:

"What, in your notes, makes you think so?" (Responses will vary.)
- When 1 minute remains, signal students that they should begin wrapping up the discussion.
- After 1 minute, signal students to stop through the use of a chime or signal. Invite them to transition back to the whole group area.
- Refocus students whole group.
- Invite students to Think-Pair-Share with an elbow partner:

"What is one thing you did well during Science Talk today?" (Responses will vary, but may include: waited for my turn to talk, used a conversation starter, looked for evidence in my paleontologist's notebook to answer the question, listened with care to other students.)

"What is one thing that felt tricky for you during the Science Talk today?" (Responses will vary, but may include: interrupted someone, didn't know how to answer the question, had trouble finding evidence in my paleontologist's notebook)

- If productive, use a Goal 3 Conversation Cue to encourage students to think about their thinking:
“What strategies from the Discussion Norms anchor chart helped you succeed in the Science Talk? I’ll give you time to think and discuss with a partner.” (Responses will vary.)
- Refocus students and invite several to share out. As time permits, celebrate areas of the Science Talk that went well and troubleshoot any areas of challenge.

Meeting Students' Needs

- To support communication and engagement, strategically partner students to ensure they have a strong, politely helpful partner to support their efforts during the Science Talk. (MME, MMAE)
- For ELLs: Create groups with varying levels of language proficiency. The students with greater language proficiency can serve as models in the group, initiating discussions and providing implicit sentence frames. If possible, consider grouping students who speak the same home language together to help one another interpret and comprehend the conversation in their home languages.
- For ELLs: It may take longer for some students to process language and follow the conversation during the Science Talk. Encourage students to speak up when they would like to hear something repeated. Empower them with questions they can ask to regulate the pace of the conversation. (Examples: “Can you please repeat what you said?” “Can you please speak more slowly?”)
- For ELLs: Introduce and model using the sentence frames to respond to others’ ideas. Display the sentence frames in speech bubbles. (Example: “Jason said that paleontologists can excavate animals from long ago. I would like to add to Jason’s idea with new details. They find evidence of animals such as bones and impressions of fish.”)

Closing and Assessment

A. Exit Ticket: Selected Response #5 (5 minutes)

- Transition students back to their workspaces.
- Direct their attention to the **Strategies for Answering Selected Response Questions anchor chart**.
- Remind students that after they read the question carefully, they can try one or more of the strategies to help them answer the selected response question. Referring to the strategy “Use details from the text to choose the best answer,” explain that students may use the Science Talk protocol anchor chart as a text that could help them to answer this question.
- Invite students to choose a strategy they don’t usually try and use it today.
- Distribute the **Exit Ticket: Selected Response #5** and guide students through the same process as in Unit 1 to complete the exit ticket, including giving the answer at the end of 5 minutes. (B: Choose another science question if everyone has answered the first one.)
- Give students specific, positive feedback regarding their use of the strategies. (Example: “I noticed that Laura tried crossing out an incorrect answer today.”)

- Collect students' exit tickets and remind them that the work they are doing with selected response questions is preparing them to be responsible students and to show what they have learned!

Meeting Students' Needs

- For students who may need additional support with fine motor skills: Consider providing an alternative method for selecting the answer. (Example: Provide three index cards marked with "A," "B," and "C" that students can use to identify their answer.) (MMAE)
- For ELLs: Reread the selected response question and response items aloud as necessary while students take a minute to choose their answers.
- For ELLs: After revealing the answer of the selected response question, take additional time to deconstruct the language in each response. Discuss what made each response correct or incorrect. (Example: "So why isn't response a correct? Right, the question is about what is not part of the protocol! And facing your group members is part of the protocol.")