

Lesson 5: Reading Scientific Text: Reading Closely about Animal Defense Mechanisms



CCS Standards

- **RI.4.2:** Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- **RI.4.4:** Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*.
- **W.4.7:** Conduct short research projects that build knowledge through investigation of different aspects of a topic.
- **W.4.8:** Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.
- **SL.4.1:** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.
- **SL.4.2:** Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- **L.4.4:** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.
- **L.4.4a:** Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.
- **L.4.4c:** Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.



Daily Learning Targets

- I can identify details that support the main idea of a section of *Animal Behavior: Animal Defenses*. (RI.4.2)
- I can paraphrase and take notes on information presented by my peers. (SL.4.1, SL.4.2)

Ongoing Assessment

- Movement Words note-catcher (RI.4.4, L.4.4)
- Determining the Main Idea note-catcher (RI.4.2)
- Observation of participation during peer share (SL.4.1, SL.4.2)

Agenda

1. Opening

- A. Engaging the Reader: Movement Words (10 minutes)
- B. Reviewing Learning Targets (5 minutes)

2. Work Time

- A. Rereading an Informational Text: Identifying Supporting Details (25 minutes)

3. Closing and Assessment

- A. Share and Debrief (20 minutes)

4. Homework

- A. Vocabulary Work from your homework resources for this unit.
- B. Accountable Research Reading. Select a prompt to respond to in the front of your independent reading journal.

Teaching Notes

Purpose of lesson and alignment to standards:

- This lesson opens with students skimming their expert group's selection of *Animal Behavior: Animal Defenses* for words that describe the movement of animals. This activity allows them to collect precise and domain-specific words that will be used later in the module when writing their informational pieces and choose-your-own-adventure narratives (RI.4.4, W.4.2d, L.4.3a, L.4.4a).
- This is the final lesson in which students reread sections from *Animal Behavior: Animal Defenses*. In the previous lessons, students worked in expert groups to determine the main idea and identify unfamiliar vocabulary of that section. In this lesson, they will continue working in the same groups to identify details that support the main idea (RI.4.2, W.4.7).
- Students will then move into mixed triads, with one representative from each expert group in each triad. In triads, they will share the main idea and best supporting details of their section while their partners listen, paraphrase, and take notes on their Determining the Main Idea note-catchers (W.4.8, SL.4.1, SL.4.2).
- While in mixed triads, students also share the words they worked to define in Lesson 4. All students add these words to their vocabulary log, to be referred to throughout the module (RI.4.4, L.4.4a, L.4.4c).
- Students who finish quickly can continue researching their additional research questions developed in Lesson 2 by reading new sections of *Animal Behavior: Animal Defenses*.
- In this lesson, the habits of character focus are working to contribute to a better world and working to become effective learners. The characteristics they are reminded of in this lesson are: apply my learning when reviewing the performance task, and initiative and collaboration because students work together as they read their expert group's selection from *Animal Behavior: Animal Defenses* and when sharing in their triads.

How it builds on previous work:

- Students practice the skills introduced and modeled in Lessons 3 and 4 when identifying supporting details in their small groups.

- The research reading students complete for homework helps to build both their vocabulary and knowledge pertaining to animals and specifically animal defense mechanisms. By participating in this volume of reading over a span of time, students will develop a wide base of knowledge about the world and the words that help to describe and make sense of it.
- Students practice their fluency in this lesson by following along and reading silently as the teacher reads *Animal Behavior: Animal Defenses* aloud in Opening A.
- Continue to use Goals 1 and 2 Conversation Cues to promote productive and equitable conversation.

Areas where students may need additional support:

- You may determine the triad groups in advance and strategically group students. One possible arrangement to consider is to group ELLs who speak the same home language in the same group, allowing them to have more meaningful discussions and clarify points in their native language.

Assessment Guidance:

- Review students' Determining the Main Idea note-catchers to ensure they understand how to identify details that support the main idea of a text.
- Consider using the Speaking and Listening Informal Assessment: Collaborative Discussion Checklist during students' small group discussions in Work Time A. See Module 1 Appendix.
- Consider using the Speaking and Listening Informal Assessment: Presentation of Knowledge and Ideas Checklist during students' share and debrief in Closing and Assessment A. See Module 1 Appendix.
- Consider using the Speaking and Listening Informal Assessment: Listening and Comprehension Checklist I during students' share and debrief in Closing and Assessment A. See Module 1 Appendix.

Down the road:

- Students will build on what they have learned about determining the main idea and identifying supporting details to write summaries of informational texts in the second half of this unit.

In advance:

- Determine mixed triad groups.
- Display the Performance Task anchor chart (from Lesson 1) and the Determining the Main Idea anchor chart (from Lesson 3)
- Post: Learning targets.

- Work Time A, Closing and Assessment A: Student Expert Group Animal research notebooks could be completed by students online, for example on Google Docs in a folder for each student.
- Work Time A, Closing and Assessment A: Students complete their note-catchers in a word processing document, for example a Google Doc using Speech to Text facilities activated on devices, or using an app or software like Dictation.io (<https://dictation.io/speech>).

Supporting English Language Learners

Supports guided in part by CA ELD Standards 4.I.B.6, 4.I.B.8

Important points in the lesson itself

- The basic design of this lesson supports ELLs with opportunities to share information from different readings in small groups. This type of activity, wherein each student reads a different section of the same text and shares it with other students who have read yet again different sections, encourages ELLs to clarify, correct, and extend their language skills as they attempt to negotiate the meaning of each other's texts and ideas.
- ELLs may find it challenging to read, comprehend, process unfamiliar language, and formulate the necessary language to share the information from the text they read. Consider strategic grouping to support students through these activities. See this section and the Meeting Students' Needs column for additional suggestions.
- Research shows that ELLs are able to effectively acquire language by interacting with other ELLs and native speakers, no matter the proficiency level. Experiment with mixed-proficiency groupings, home language groupings, and English with other home language groupings to see which your students thrive on in various contexts.

Levels of support

For lighter support:

- Invite students to create sentence frames for students who need heavier support to use during Closing and Assessment A.
- Buy or ask for large paint chips from a local hardware or paint store, or print them online. Write words with close meanings, such as *swimming*, *jetting*, and *scooting*, each one on a different shade of the paint chip. Place them on the wall and discuss the shades of meaning in relation to animal movement.

For heavier support:

- Build confidence and foster inclusion by practicing with an enthusiastic ELL to read the prompt on the Performance Task anchor chart. Then call on the student to read it at the appropriate time in the lesson.

Animal Defense Mechanisms

- Prepare some pictures of animals moving (e.g., springbok jumping, bird flying, fish swimming, turtle plodding).
- Before the mid-unit assessment, expand ELLs' knowledge of animal names, specifically: otter, snake, butterfly, octopus, kitten, pufferfish, crab, lion, porcupine, rhinoceros, squid, barracuda, lizard, armadillo. Example: Have students make picture cards of animals to play Concentration. (Make sure you have two cards of each animal and that the students have to name the animal when they turn over the card and to take the match.)

Universal Design for Learning

- **Multiple Means of Representation (MMR):** Some students will need additional practice finding the main idea and key details between lessons in this unit. Either meet with this small group of students to determine the main idea and supporting details of portions of their independent reading books or give them an independent/partner activity such as the following: Given some main ideas and supporting details from *Venom*, *Animal Behavior: Animal Defenses*, or students' independent reading books written on index cards, have students match the supporting detail cards with the corresponding main idea.
- **Multiple Means of Action & Expression (MMAE):** In strategically grouping students in expert groups, be sure there is one strong writer in all groups to ensure that each group member has accurately recorded the main idea and best supporting details that they can share when moving into mixed triads. Prepare students to share an important vocabulary word in a mixed triad in advance by meeting with a small group to go over the words they have collected so far and choose one word they understand well that they can explain to others. Have students practice teaching this small group what the word means so they are ready to do so in a mixed triad during the lesson.
- **Multiple Means of Engagement (MME):** In this lesson, some students may need support to remember the goal for the work they are doing with the text. 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

(W): Vocabulary used in writing

- main idea, support (L)
- armor, fleeing, poison, predator, pursue, threatened (T)

Materials

- Performance Task anchor chart (begun in Lesson 1)
- Equity sticks
- Working to Contribute to a Better World anchor chart (begun in Lesson 1)

- ✓ *Animal Behavior: Animal Defenses* (book; one per student and one to display, cover and pages 10–11, 22–26, 38, 49–52, and 55–58)
- ✓ Animal Defenses research notebook (distributed in Lesson 1; one per student and one to display)
 - Movement Words note-catcher (page 22 of Animal Defenses research notebook)
 - Determining the Main Idea note-catcher (pages 20–21 of Animal Defenses research notebook)
- ✓ Movement Words note-catcher (answers, for teacher reference)
- ✓ Working to Become Effective Learners anchor chart (from Module 1)
- ✓ Determining the Main Idea note-catcher (answers, for teacher reference)
- ✓ Determining the Main Idea anchor chart (begun in Lesson 3)
- ✓ Vocabulary log (one per student; begun in Module 1)

Opening

A. Engaging the Reader: Movement Words (10 minutes)

- Congratulate students on their hard work learning more about animal defense mechanisms over the last several lessons.
- Explain that before they finish up working in their expert groups and sharing what they have learned, students will have a chance to collect words in their research notebooks that describe how animals move.
- Display the **Performance Task anchor chart**. Use **equity sticks** to call on a student to read the prompt. Remind students that they have been learning about animal defenses in order to write an informational piece about an animal and to write a choose-your-own-adventure story featuring that animal later in the module.
- Focus students on the **Working to Contribute to a Better World anchor chart**, specifically apply my learning. Remind students that as they will be creating their choose-your-own-adventure narratives, they will be applying what they have learned to teach others about animal defense mechanisms.
- Distribute copies of *Animal Behavior: Animal Defenses* and invite students to turn to page 24. Explain that you are going to read aloud a paragraph from this section, and you would like them to listen for all of the words that describe the ways animals move.
- Read aloud the third paragraph, from “Swimming, slithering, climbing ...” to “... jets of water that scoot it away,” inviting students to follow along as you read.
- Use equity sticks to call on students to share words they noted (*swimming, slithering, climbing, flying, running, jumping, filling, pushing, jetting/jets, scoot*).
- Point out that the author included many descriptive words about how animals move in this paragraph and throughout the book.
- Ask, and then cold call students to share out:

“Why might the author have chosen to use so many descriptive and precise words in this book?” (To help the reader better understand how animals move to protect themselves.)
- If productive, cue students to listen carefully and seek to understand:

“Who can tell us what your classmate said in your own words?” (Responses will vary.)

- Validate student responses and explain that these words will be helpful when they go to write their choose-your-own-adventure stories later in the module.
- Tell students to open their **Animal Defenses research notebooks** to the **Movement Words note-catcher**. Explain that in a moment, they will skim through their expert group selections of *Animal Behavior: Animal Defenses* and jot down words the author used that describe how animals move.
- Point out the Source column on the note-catcher and remind students that when they cite evidence, it is important to explain where that evidence came from so they can return to it later or others can find it.
- Invite students to begin working.
- Circulate to support students. Refer to the **Movement Words note-catcher (answers, for teacher reference)**. Look for students recording descriptive words showing how animals move and the page from the text where the words were found.
- Refocus whole group. Invite volunteers to share out words they recorded.

Meeting Students' Needs

- For students who may need additional support with organizing ideas for written expression: Consider providing a partially completed note-catcher for students who need support organizing or recording their ideas. (MMAE)
- For ELLs: Use a pre-reading strategy to get students thinking about words for animal movement. Tell them: “We’re going to read from *Animal Behavior: Animal Defenses*. We’re going to read about the ways animals move. Can you think of some words to describe the ways animals move?” Show pictures of animals moving. Jot down student responses. “Now let’s open to page 24. Listen for more words that describe the ways animals move.”

Opening

B. Reviewing Learning Targets (5 minutes)

- Invite students to read the learning targets:
 - “I can identify details that support the main idea of a section of *Animal Behavior: Animal Defenses*.”**
 - “I can paraphrase and take notes on information presented by my peers.”**
- Underline the phrase *main idea*. Ask students to turn and talk:
 - “What is the main idea of a text?” (It’s the most important idea from the text.)**
- Circle the word *support* and ask them to share with their partner what they think the word *support* means. (It means to give evidence for or verify.) Tell students that they will find details that support, or verify, the main idea of their section of the text.

Meeting Students' Needs

- For students who may need additional support with comprehension: Invite students to draw a sketch that helps them define key vocabulary such as *identify*, *support*, *main idea*, *paraphrase*, and *presented*.
- For ELLs: Encourage students to add *main idea* and *support* to their vocabulary logs. They can include translations and collect samples in context. (For example, they can record you or their peers using *main idea* during discussions in class.)

Work Time

A. Rereading an Informational Text: Identifying Supporting Details (25 minutes)

- Remind students that they have been working with a section of *Animal Behavior: Animal Defenses* to determine the main idea.
- Explain that they will now have a chance to reread their section of the text with their expert groups to find details that support the main idea of their section.
- Focus students on the **Working to Become Effective Learners anchor chart**, specifically collaboration. Remind students that as they will be working with one another as they read, they will need to collaborate.
- Invite students to gather into their expert groups and turn and talk about the following question:

“What is the main idea of your expert group’s section of Animal Behavior: Animal Defenses?”
- Tell students to open their Animal Defenses research notebooks to the **Determining the Main Idea note-catcher** on pages 20–21.
- Direct their attention to the **Determining the Main Idea anchor chart**. Ask:

“What are supporting details?” (Supporting details are the explicit information or evidence from the text that supports the main idea.)
- Ask:

“How do we identify details that support the main idea of a section of the text?” (We think about what the text is mostly about as we read each paragraph and confirm or change our thinking about the main ideas based on the details we’re reading, or We think about what the text is about and gather details to confirm this original thinking about what the text is about or more precisely focus this thinking.)
- If productive, cue students to expand the conversation by saying more, and to listen carefully and seek to understand:

“Can you say more about that?” (Responses will vary.)

“Who can tell us what your classmate said in your own words?” (Responses will vary.)
- Tell students they should write the supporting details for their section only and should leave the other sections blank for now.
- If necessary, review identifying details that support the main idea of “Lying Low” (pages 10–11) or “A Life in Hiding” (pages 11–12) and going through the process just discussed.
- Give students 20 minutes to work through the steps with their partners to identify details that support the main idea of their section. Circulate and support as needed. Refer to the

Determining the Main Idea note-catcher (answers, for teacher reference). Listen for students using the steps and following class norms when working in a small group. Probe by asking: “How does that detail support the main idea?” or “Why does this detail better support the main idea than that detail?” Be sure to check in with students who gave a thumbs-down at the end of Work Time Part B in Lesson 4.

- After 20 minutes, invite students to show a thumbs-up if they were able to identify details that support the main idea of their section and a thumbs-down if they were not. Affirm students showing a thumbs-up. Check in with students who gave a thumbs-down during the closing of the lesson.

Meeting Students' Needs

- For ELLs: Provide students with a sentence starter or frame to aid in language production. For example: *One idea that is repeated again and again is ...* or *A detail that supports the main idea of our section is....*
- For students who may need additional support with comprehension: Provide key sections that are pre-highlighted in their texts. This will help them focus on small sections rather than scanning the whole text for answers.
- For ELLs: Highlight and discuss the language structures of a critical supporting detail with students. Elicit paraphrases of the structure and ask questions to tease out its meaning.

Closing and Assessment

A. Share and Debrief (20 minutes)

- Explain to students that they will now regroup into triads, with one person from each expert group in each triad. Tell them they will share the main idea of their section, as well as the best supporting details.
- Focus students on the Working to Become Effective Learners anchor chart again, specifically initiative. Remind students that as they will be working with one another as they read, they will need to take initiative and stay on track as they work.
- Invite students to use the following steps to share:
 1. Group 1 representative starts. Group 2 and 3 representatives listen.
 2. Group 1 representative tells partners the main idea of his or her section. Group 2 and 3 representatives paraphrase the main idea.
 3. Group 2 and 3 representatives write the main idea of that section in the appropriate spot on their Determining the Main Idea note-catchers.
 4. Group 1 representative shares supporting details. Group 2 and 3 representatives paraphrase the supporting details.
 5. Group 2 and 3 representatives write the supporting details for that section in the appropriate spot on their note-catchers.
 6. Repeat the process for Group 2 and 3 representatives.

- Give students 10 minutes to work. Circulate and support as needed. Use this as an opportunity for formative assessment of the learning target “I can paraphrase and take notes on information presented by my peers.”
- After 10 minutes, refocus whole group. Tell students that now they will share the vocabulary words they collected for their sections. Invite them to take out their **vocabulary log**.
- Tell students that in a moment, you would like them to choose a word that their expert group determined the meaning of in Lesson 4, explain what it means to their triad, and explain why they chose that word to share. Tell students that as one partner shares a word and explains its meaning, the other partners should record the definition of the word in their vocabulary log.
- Give students a minute or two to choose a word and to think about how to explain it and why they chose it.
- Ask students to begin sharing in their triads.
- Invite students to share out whole group.
- Repeat as time allows.
- Debrief the sharing process.
- Focus students on the learning targets. Read each one aloud, pausing after each to use a checking for understanding protocol for students to reflect on their comfort level with or show how close they are to meeting each target. Make note of students who may need additional support with each of the learning targets moving forward.
- Repeat, inviting students to self-assess against how well they took initiative and collaborated in this lesson.

Meeting Students' Needs

- For students who may need additional support with comprehension: Provide running notes that could be used to paraphrase the main idea and supporting details of the others in their mixed triads.
- For ELLs: As students interact, jot down samples of good communication. Also jot down one or two common language errors (pervasive, stigmatizing, critical). Share each of these with the class at the end of Closing and Assessment, allowing students to take pride in the good communication and to correct the errors. (It's not necessary to identify who communicated well or who made errors. However, you might wish to pull the student aside to make it clear.)

Homework

A. Vocabulary Work from your homework for this unit.

B. Accountable Research Reading. Select a prompt to respond to in the front of your independent reading journal.

Meeting Students' Needs

- For ELLs and students who may need additional support with reading and writing: Refer to the suggested homework support in Lesson 1. (MMAE, MMR)