Lesson 5: Organizing and Categorizing Research

CCS Standards

- **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.

Daily Learning Target

- I can organize my research into categories. (W.4.8)

Ongoing Assessment

- Expert Group Animal research notebook: Organizing Research note-catcher (W.4.8)

Agenda

1. **Opening**

   A. Reviewing the Learning Target (5 minutes)

   B. Finding the Gist and Unfamiliar Vocabulary: Kenya note-catcher (RI.3.4, L.3.4)

2. **Work Time**

   A. Generating Categories to Organize Research (10 minutes)

   B. Expert Group Work: Organizing Research (30 minutes)

3. **Closing and Assessment**

   A. Mix and Mingle: Animal Defenses Freeze Frame (5 minutes)

4. **Homework**

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

   B. Categorize research from your independent research reading. Determine categories depending on the information you are research reading. Use the Categorizing and Organizing Information graphic organizer in your Unit 2 homework packet.

Teaching Notes

Purpose of lesson and alignment to standards:

- In this lesson, students organize their research into categories. The whole group determines the categories based on the Performance Task anchor chart and the questions they have been asking themselves during their research in previous lessons (W.4.8).

- In Work Time A, it is important that students understand the priority of the defense mechanisms information from their research. When students are choosing categories to organize their writing, one of the columns should be for defense mechanisms and how they help the animal to survive.

- The research reading that students complete for homework will help build both their vocabulary and knowledge pertaining to animals and specifically animal defenses. 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 describe and make sense of it.

■ During this lesson, as students are organizing their research, aim to check in one-on-one with students and their independent reading notebooks.

How it builds on previous work:

■ In addition to categorizing information from the web page, students will also categorize information from the "Fight to Survive!" text they read in Lesson 2.

■ Continue to use Goals 1-3 Conversation Cues to promote productive and equitable conversation.

Areas where students may need additional support:

■ Some students may require support recording their information in the correct category on the Organizing Research note-catcher.

■ Students may also need additional time categorizing their information from "Fight to Survive!" and from the expert group animal web page.

Assessment guidance:

■ Ensure that students understand how to categorize information. Students will need this categorized information in the second half of the unit to write their informative pieces.

■ Consider using the Speaking and Listening Informal Assessment: Collaborative Discussion Checklist during students' small group discussions in Work Time B.

Down the road:

■ In the next lesson, students will complete the Mid-Unit 2 Assessment, in which they demonstrate how to determine the main idea and explain how it is supported by details, how to summarize a text, and how to categorize research information.

■ Students will use the research they have organized to write an informative piece about their animal and its defense mechanisms for the End of Unit 2 Assessment. This informative piece will serve as the introduction to their choose-your-own-adventure narrative in Unit 3.

In advance:

■ Review and prepare music for the Mix and Mingle protocol.

■ Post: Learning targets.

Technology & Multimedia

■ Work Times A and B: Consider using a web page annotation tool—for example, https://www.diigo.com annotating web pages before organizing the research information onto the Organizing Research note-catcher. Model this in Work Time A and invite students to use the tool for their own work in Work Time B.

■ Work Times A and B: 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.C.10

Important points in the lesson itself

- The basic design of this lesson supports ELLs with opportunities to categorize the different parts of their research. The process of categorizing can help students better understand and learn the language inherent to their research and help them build their summarizing skills in preparation for the Mid-Unit 2 Assessment.

- ELLs may find the complex language of the research challenging. Help students by identifying key language structures in the research that signal the correct way to categorize it. For example, in the "Defense Mechanisms" category, highlight the structure "... two domed shells ... three armoured bands ..." in the armadillo text. Ask questions such as: "What is a shell? Let's point to the shell in the picture. What kind of shell is it?" (domed) Draw a picture of a dome shape and a flat shape and ask students what the difference is. Finally, ask: "Why does the armadillo have two domed shells? What category does 'two domed shells' belong in? Why?"

Levels of support

For lighter support:

- Give students a work bank of words, phrases, and categories: text, talks about, appearance, habitat, diet, and defense mechanisms. Ask them to use the bank to help them orally summarize their text within their expert groups. Invite an ELL who needs lighter support to model. Example: "This text talks about the gazelle and what it looks like, where it lives, and what it eats. It also discusses the gazelle's predators and defense mechanisms." Encourage students to expand the language structures in the bank with substitutions such as "provides an overview of" in place of "talks about."

- As the Mid-Unit 2 Assessment approaches, suggest that students explain to ELLs who need heavier support that it is critical for them to raise their hand if they don't understand something. Invite students to create sentence frames for ELLs who need heavier support: "Excuse me, but I don't understand. What do you mean by _____?" "Could you repeat that in a different way?"

For heavier support:

- Students may struggle to create the language for the category labels. Allow for some language errors during the process of creating a correct label. Support students by placing them in home language groups or with partners who have advanced language proficiency, or by providing categories.

- Recycle the words and phrases *appearance*, *habitat*, *diet*, *predator*, *survive*, *cite evidence*, and *source* by displaying these words with some cloze sentences. Use sentences from the expert group animal text when possible. Example: "The monarch butterfly can be found in a variety of open _____." Ask students to discuss the correct cloze word (habitats).

- As students move toward the Mid-Unit 2 Assessment, remind them that they will be asked to complete tasks that are similar to the tasks in Lessons 1–5. However, the texts and presentation of the tasks can be quite different. As a test-taking strategy, remind them to focus on language they have learned in Lessons 1–5 that they can apply to the assessment.

For example: common structures such as "continue to roam" and "continue to head north" and common vocabulary such as "shape" and "size."

Universal Design for Learning

- **Multiple Means of Representation (MMR):** In this lesson, support learners with auditory processing needs by writing keywords that students use during class discussions on the board as visual cues. Pre-read all anchor charts in advance with students who may need additional support with reading and let them know why and how each of these anchor charts will be used during the lesson.

- **Multiple Means of Action & Expression (MMAE):** Some students may need additional support in strategy development. Support this skill by practicing how to organize research by meeting with them to model categorizing another paragraph from the millipede text. Continue to use the rest of this text as these learners practice the skill of organizing research into categories, using any of the supports found in the lesson.

- **Multiple Means of Engagement (MME):** Set the context for this lesson by meeting with a small group of students who may need additional support (potentially the gazelle group). Emphasize that animal defenses are the primary focus of the research because that information will make up a significant portion of the informative writing piece. Briefly and specifically discuss what animal defenses are. This discussion will help students stay focused on their goal and not feel overwhelmed by all the extra steps that go into reaching that goal.

Vocabulary

Key:

(L): Lesson-Specific Vocabulary

(T): Text-Specific Vocabulary

(W): Vocabulary used in writing

- categories, evidence, informational (L)

Materials

☑ Expert Group Animal research notebooks (distributed in Lesson 1; one per student)

  – KWEL chart (page 1)

  – Web Page Research Guides (pages 12–16)

  – Reading for Gist and Unfamiliar Vocabulary (page 10)

  – Organizing Research note-catcher (pages 17–18)

  – Close Read Questions: "Fight to Survive!" (pages 2–9; completed in Lesson 2)

  – Organizing Research Directions (page 19)

☑ Millipede web page (found on Millipede: Reading for Gist and Unfamiliar Vocabulary from Lesson 3; one for display)

☑ Millipede KWEL chart (from Lesson 1; one for display)

☑ Millipede KWEL chart (example, for teacher reference)

☑ Researchers Do These Things anchor chart (begun in Module 1, Unit 1, Lesson 3)

☑ Performance Task anchor chart (begun in Unit 1, Lesson 1)

☑ Equity sticks

☑ Millipede: Organizing Research note-catcher (one for display)

☑ Millipede: Organizing Research note-catcher (example, for teacher reference)

☑ "Fight to Survive!" (distributed in Unit 1; one per student)

☑ Close Reading Guide: "Fight to Survive!" (answers, for teacher reference; from Lesson 2)

☑ Millipede: Organizing Research Directions (one for display)

☑ Organizing Research note-catchers (answers, for teacher reference)

☑ Working to Contribute to a Better World anchor chart (from Unit 1, Lesson 1)

Opening

A. Reviewing the Learning Target (5 minutes)

▪ Direct students' attention to the posted learning target and ask for a volunteer to read it aloud:

"I can organize my research into categories."

▪ Ask students to discuss with an elbow partner, and then select volunteers to share their responses:

*"What are **categories**?" (Categories are groups of things with shared characteristics.)*

"Why do we need to organize our research into categories?" (It will help us keep our thoughts organized when we begin to plan and write about what we have learned.)

▪ Provide the example that you could categorize different types of food into dairy, meat, fruit, and vegetables. Ask, and then cold call students to share their responses:

"If you were given a list of animals, how could you categorize them into groups? What might those groups be?" (mammals, birds, insects, etc.; animals with hair or without hair, or with wings or without wings; etc.)

▪ If the word *categories* has not been added to the Academic Word Wall, add it now.

Meeting Students' Needs

▪ For ELLs: Mini Language Dive. Highlight language structures that are critical to understanding the posted learning target. Example: "organize my research," "into categories." Work on comprehension of these phrases, for example, by eliciting paraphrases of these structures. Example: "put the parts of my research into different groupings."

▪ For ELLs: Say: "The word *categories* is often used with the words *put* and *into*, e.g., 'Put the research into categories.'"

▪ For ELLs and students who may need additional support with organizing information: Give students additional models of recycled research from the expert group animal and their possible categories. Example: "medium to large sized," "the slender springbok," "the entire five centimetre-long body." Ask: "What is a good category to use to organize this research?" (size) (MMR, MMAE)

Opening

B. Engaging the Reader: Expert Group Animal Defense Mechanisms KWEL Charts (10 minutes)

▪ Invite students to take their **Expert Group Animal research notebooks** and move to sit with their expert groups.

▪ Ask students to open to the **KWEL chart**. Remind them of the questions at the top of the chart. Cold call students to read each of the questions aloud for the whole group:

"What does your expert group animal look like?"

"What is its habitat?"

"What are its predators?"

"How does your expert group animal use its body and behaviors to help it survive?"

▪ Remind students that they already filled out some information on this chart in Lessons 1 and 2 and explain that, to refresh their memories about what they have learned about their expert group animal so far, they are going to add some more learning to it.

▪ Remind students that the E means evidence and the L is what they learned.

▪ Focus students on the word *evidence* on the Word Wall and ask them discuss with an elbow partner. Then select volunteers to share their responses with the whole group:

"What is **evidence**? *Why do we need to cite* **evidence**?*" (Evidence is facts or information cited to support a claim or answer and adds validity to the claim.)*

▪ Focus students on the Source column on their KWEL charts and remind them that when they cite evidence, it is important to explain where the evidence came from. This makes it easy to return to later or for someone unfamiliar to find it and confirm that the writing is indeed reliable.

▪ Display the **Millipede web page** and model how to do this on the **Millipede KWEL chart**. See **Millipede KWEL chart (example, for teacher reference)**.

▪ Emphasize to students that evidence should be copied carefully, word for word, and should be written within quotation marks.

▪ Focus students on the Citing Sources section of the **Researchers Do These Things anchor chart.** Invite them to read silently in their heads as you read the criteria aloud.

▪ Model this on the Millipede KWEL chart in the Source column, next to the evidence you recorded as a model.

▪ Invite students to read the information they collected in their **Web Page Research Guides** in their Expert Group Animal research notebooks to add some evidence to their KWEL charts. Remind them that the web page source is recorded at the top of **Reading for Gist and Unfamiliar Vocabulary** on page 10 of their research notebooks.

▪ Circulate to support students in recording evidence and sources. Look specifically at their use of quotation marks and the way they are citing the web page.

Meeting Students' Needs

▪ For students who may need additional support with fine motor skills: Enlarge or modify the Expert Group Animal research by offering a template with lines or a larger space for writing. (MMAE)

- For ELLs: Repeat the question "Why do we need to cite evidence?" In addition, rephrase the question: "Why is it important to give proof?"

- For ELLs: Say: "Check your writing after you copy your evidence into the KWEL chart. Look at the first word in your chart, and then look at the text. Make sure they are exactly the same. Then check the second word, third word, and so on." Model this process for them. Have them pay special attention to copying spelling, capitalization, and punctuation correctly.

- For ELLs: Mini Language Dive. Identify a strong piece of evidence and highlight the critical language structures within. Example for armadillos: "Predators: 'It does not appear to seek refuge in burrows, and instead relies upon its ability to roll into an impregnable ball when threatened.'" Work toward comprehension of these structures—for example, by asking questions: "What does the armadillo do when it is in danger?" (rolls into a ball) "Does it hide in burrows?" (Point to does not.) "What do you think *impregnable* means? Easy to break into? Not breakable? Why?" If there is a safe, clean place on the floor, have volunteers demonstrate the armadillo's defense mechanism.

Work Time

A. Generating Categories to Organize Research (10 minutes)

- Draw students' attention to the **Performance Task anchor chart** and reread the prompt. Remind them that they are working toward writing a narrative in this module.

- Point to the second bullet point of the prompt ("an informational page …") on the anchor chart and remind students that they will work on this part of the performance task in this unit.

- Use **equity sticks** to call on a student to read the second bullet aloud:

  "An informational page with a physical description of your animal, its habitat, its defense mechanisms, and predators"

- Invite students to turn to the **Organizing Research note-catcher** in their Expert Group Animal research notebook.

- Display the **Millipede: Organizing Research note-catcher**.

- Cold call a student to read the questions at the top of the page aloud for the whole group: "What does your expert group animal look like? What is its habitat? What are its predators? How does it use its body and behaviors to help it survive?"

- Remind students of the link between these questions and the bullet on the Performance Task anchor chart.

- Emphasize the reason the question is in bold. Explain that animal defenses are the primary focus of the research because that information will make up a significant portion of the informative writing piece. Remind students that the other information they collected (what their animal looks like and its habitat) will provide context for the reader, who may not know anything about the animal.

- Establish the purpose for categorizing information with students. Ask, and then select students to share their responses:

  "You have collected a lot of different information so far in your research notebook. How can you ensure you are able to quickly find information? For example, how will you be

able to locate information about your animal's habitat?" (They need to categorize their information.)

- Focus students' attention on the table on their Organizing Research note-catcher. Point out the three unlabeled columns. If productive, cue students with a challenge:

  "Can you figure out how to categorize the research you have collected? How could you label these columns to help you organize your information? I'll give you three minutes to think and discuss with your expert groups."

- If necessary, prompt students to think about the questions they have been trying to answer through their research.

- Give students 3 minutes to think about and discuss this with their expert groups.

- Refocus the whole group.

- Use equity sticks to select students to share their group ideas for categories. Guide them to consider the following: 1) Defense Mechanisms and How They Help the Animal to Survive, 2) Sources, 3) General Information (for information related to the other research questions about the animal's appearance and habitat).

- If productive, cue students to expand the conversation by giving an example, and to listen carefully:

  "Can you give an example that would fit that category?" (Responses will vary.)

  "Who can repeat what your classmate said?" (Responses will vary.)

- Record the chosen headings in the displayed Millipede: Organizing Research note-catcher. See **Millipede: Organizing Research note-catcher (example, for teacher reference)** as a guide.

Meeting Students' Needs

- For students who may need additional support with confidence when reading: When selecting a student to read bullet points aloud, consider giving an opportunity to practice one of the points in advance as extra fluency work and as an opportunity to read publicly with success. (MMAE, MME)

- For ELLs: Repeat the question "How can you ensure you are able to quickly find information?" In addition, rephrase the question: "You have a lot of evidence. Soon, we will start writing. How can we make it easy to find the right evidence?" Repeat and rephrase student responses to the question.

- For ELLs: Repeat the questions "How could you categorize the research you have collected?" and "How could you label these columns to help you organize your information?" In addition, rephrase the questions. Example: "How can you put your pieces of research into different groups?"

- For ELLs: Let students know that category labels usually aren't complete sentences. They are like titles, made up of a few important words.

- For ELLs: Give students a couple of good examples of a column label—for example, General Information. Provide an example of a good piece of evidence to include in that column. Tell them: "Think of three good category titles for the different parts of your research."

Work Time

B. Expert Group Work: Organizing Research (30 minutes)

■ Model how to organize research on the displayed Millipede: Organizing Research note-catcher. Begin with categorizing information from the close read of the **"Fight to Survive!"** text in Lesson 2.

■ Invite students to refer to "Fight to Survive!" and their **Close Read Questions: "Fight to Survive!"** Refer to the **Close Reading Guide: "Fight to Survive!" (answers, for teacher reference)**.

■ Remind students that this displayed chart is being filled out for the millipede.

■ Post the following directions:

1. Work with a partner to reread "Fight to Survive!"

2. Underline any information that is about the millipede. Emphasize that this could be general information or information about millipede defense mechanisms.

■ Give students 5 minutes to work with their partners.

■ Refocus the group. Ask:

"Is there any information in the text about the millipede? What information did you underline? Why?"

■ Use equity sticks to select students to share the information they underlined. First, record the Source in the source column.

■ With each piece of information provided, ask:

"How would you categorize this information? Is it general information? Or is it information about the millipede's defense mechanisms and how they help the animal to survive?"

■ Model recording information in the correct category on the Millipede: Organizing Research note-catcher. Repeat with each new piece of information. Refer to the Millipede: Organizing Research note-catcher (answers, for teacher reference) as a guide.

■ Display the millipede web page.

■ Explain that you are going to reread the first paragraph aloud and you would like students to read along silently in their heads. Also, ask them to look for any information that might fit in either the General Information or the Defense Mechanisms columns of the Millipede: Organizing Research note-catcher.

■ Record the web page as a new source in the Source column.

■ Ask:

"Did you read or hear any information about the millipede in this first paragraph that we should record on the note-catcher?"

■ Select volunteers to share their responses. Model recording information in the correct category on the Millipede: Organizing Research note-catcher. Refer to the Millipede: Organizing Research note-catcher (answers, for teacher reference) as a guide.

■ Explain that students are now going to work with their expert groups to do the same thing for their animal.

■ Display the **Millipede: Organizing Research Directions** and invite students to turn to **Organizing Research Directions** on page 19 of their Expert Group Animal research

notebook. Select one student from each expert group to read the directions aloud for their group while the other students read silently in their heads.

- Invite students to work with their expert groups to follow the directions to categorize their research.

- While students are working independently, aim to check in with as many students and their independent reading notebooks as possible to ensure that they are research reading independently for homework, logging their reading, and responding to appropriate research reading prompts.

- Refer to the **Organizing Research note-catchers (answers, for teacher reference)** to support students with organizing their research.

- Focus students on the **Working to Contribute to a Better World anchor chart**, specifically use my strengths. Use a checking for understanding protocol for students to reflect on how well they used their strengths when working with their expert groups.

- 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.

Meeting Students' Needs

- For students who may need additional support with writing fluency: Offer the option of underlining both the millipede texts as well as their expert group animal texts with a different color for each category (Example: red for defense mechanism information, blue for information about habitat, etc.). This will give them the opportunity to show what they know about categorizing without being tripped up by writing.

- For ELLs: Check comprehension of the categorization of the millipede information by asking: "Why did we put the evidence 'Africa's arid southwest" in this column?" (Because that's the General Information column. It's where it lives.) "Why didn't we categorize that evidence as Defense Mechanisms in this column?" (Because that's where it lives, not how it protects itself.) "Can I categorize 'Africa's arid southwest' as a Source in this column?" ("No. The web page goes in the Source column.")

Closing and Assessment

A. Mix and Mingle: Animal Defenses Freeze Frame (5 minutes)

- Invite students to consider their animal's defense mechanisms. Ask them to consider how they might use their own bodies to re-create one defense mechanism in a "freeze frame," or a frozen pose.

- Tell students that they are going to follow the Mix and Mingle protocol. When the music stops, they are going to pair up with the person closest to them to show them a "freeze frame" of their animal's defense mechanism. The partner is going to try to guess which animal the other student is researching based on the "freeze frame." Then they will switch roles.

- Start the Mix and Mingle protocol, repeating two or three times.

▪ If productive, cue students to think about their thinking:

"How does our Mix and Mingle add to your understanding of animal defense mechanisms? I'll give you time to think and discuss with a partner." (Responses will vary, but could include: It helped me understand other defense mechanisms better.)

▪ Tell students that in the next lesson, they are going to complete a mid-unit assessment in which they demonstrate skills such as determining the main idea, summarizing, organizing research into categories, and citing evidence from the text.

Meeting Students' Needs

▪ For students who may need additional support with information processing: Provide some examples of what students might do for their freeze frame. It may also be useful to have expert groups meet before starting the Mix and Mingle protocol to demonstrate their freeze frame ideas and practice their frozen poses. (MMR, MMAE)

▪ For ELLs: Provide sentence frames to help students explain the defense mechanism. Examples:

– "This protects the animal by _____."

– "The animal does this so that _____."

Homework

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

B. Categorize research from your independent research reading. Determine categories depending on the information you are research reading. Use the Categorizing and Organizing Information graphic organizer in your Unit 2 homework packet.

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)

▪ For ELLs: Provide students who need heavier support with at least one appropriate category and at least one corresponding piece of information.