

## Day 11: Going on a D-Hunt



### Mini-Lesson

The teacher models the strategy of “making connections” to teach children how to match new information with what they already know as they create an anchor chart together.



### Inquiry Circles

Learners finish up the last questions on their Inquiry Charts and check for any missing information.



### Guided Science Investigation

Learners participate in an outdoor scavenger hunt to look for evidence of decomposition and/or decomposers.

**Literacy Strategy:** practice making connections.

**Reading TEKS**

ELA.1.6E

**CCSS**

**RI.1.3**

**Science Concept:** Decomposition is an important part of the life cycle of organisms. It releases carbon and nitrogen into the air, land, and water, providing nutrient cycling essential for continuing life on Earth.

**Science TEKS**

**2018–19:** 1.2C, 1.2D

**2024–25:** 1.1E, 1.1F

**NGSS**

1-LS1-2, 1-LS3-1

**Science and Literacy Connection:** scientists and strategic readers make connections between what they already know and new information they collect through observations, investigations, and reading.

## Mini-Lesson (15 minutes)



### OVERVIEW

The work of scientists requires making connections between their research and their investigations. For example, while making observations in nature, a scientist may notice details that can answer a question the scientist is researching. Or, the research can help explain what the scientist is seeing!

**Note:** You are encouraged to create a “Making Connections” anchor chart with your learners as you move through the lesson, using the provided anchor chart as a model. Post it for easy reference when completed and remind learners to use the strategy during inquiry circles.

## MATERIALS

### Teacher needs:

- chart paper
- marker(s)
- “Making Connections” anchor chart as a model
- exploratory text about pill bugs to model the strategy

## PROCEDURE

Each *italicized statement* below contains suggested wording the teacher may use for the lesson; additional teacher actions or considerations are in parentheses.

### EXPLAIN THE STRATEGY

#### Tell what the strategy is (declarative knowledge)

1. *Our strategy today is called “making connections.” It is thinking about the text and how it relates to me, another text, or the world. I can also think about science and how it relates to me and the world.*

#### Tell when and why to use the strategy (conditional knowledge)

1. *I know to use this strategy (making connections) because the text or science investigation reminds me of something I already know. This strategy is important because my brain stores information in neat compartments (like drawers, or buckets). As I observe the world around me, my brain is always trying to “match” the new information with what I already know. Some people call this a “schema.” Making connections helps me organize new information in my brain so I can find or locate it later.*

#### Tell how to use the strategy (procedural knowledge)

1. *The first thing I do is access my schema about the topic. I can think about what aspects of the old information can help me understand the new information.*
2. *I can ask myself literacy questions, such as “How does this text relate to something I’ve already **done** before? How does this text relate to something I have **read** before? How does this text relate to something that I’ve **seen** in a movie or **heard** in a song or in something someone has told me about?”*
3. *I can also ask myself science questions, such as “Have I observed anything like this in my life? Have I seen something similar in other experiences?” (Use this time to model making a connection between something in the text about pill bugs and something you have observed during the science investigation. Invite learners to share their own connections.)*
4. *Now, I will use those connections I’ve made to help me **understand** what I’m seeing (in science) or reading (in a text). Once I’ve made the connection, my schema may have been changed or been reaffirmed.*

## Science Inquiry Circles (30 minutes)

### OVERVIEW

Learners should be finishing up the last questions on their Inquiry charts or adding new information from other resources. Today is a good day to check their progress!

## MATERIALS

### Each team needs:

- pencils
- team Inquiry Chart
- exploratory texts/media (or a Nearpod or similar tool created by the teacher; see the “Exploratory Texts and Media” spreadsheet for ideas)

### Teacher needs:

- class Inquiry Chart about pill bugs
- exploratory text, website, or eBook about pill bugs to model the strategy (optional)
- “Inquiry Toolbox” anchor chart

## PROCEDURE

Each *italicized statement* below contains suggested wording the teacher may use for the lesson; additional teacher actions or considerations are in parentheses.

## PROCEDURE

### Before Inquiry Circles

1. *It is time to get into our inquiry circles. You will be with the same team as yesterday.*
2. *We have answered many of our Inquiry Chart questions. Remember, we use our Inquiry Chart to determine what questions still need to be answered. Today we will answer more questions or use a different book, website, or eBook to add information to a question we’ve already answered.* (You may either remind your learners about the mini-lesson this morning, model it again using an additional resource, or point out that one resource may answer multiple questions.)
3. *Now, inquiry circles will work together on their Inquiry Chart.* (Be sure to display the class Inquiry Chart as a model.)

### During Inquiry Circles (20 minutes)

1. *As you continue to look for information, do not forget that it is important to record your resources on the Inquiry Chart as you complete it.* (Remind learners that the pill bug Inquiry Chart is visible as a guide. Also, you may choose to be more explicit for your class and only allow them to answer one question at a time daily. Use your judgement on the level of guidance.)
2. *Remember, we have anchor charts to help guide your thinking. Do not forget to use them while working.* (Refer to the “Inquiry Toolbox” anchor chart and all of the mini-lesson anchor charts. Remind learners that they can use any of the reading strategies during inquiry circles.)
3. *My role is to help guide the inquiry circles, but I expect you to work as a team to solve your problems together.* (While teams are working together, walk around the room to facilitate as needed.)

### After Inquiry Circles (10 minutes)

1. *As we conclude our inquiry circles for today, each team will have a chance to share the questions they answered, as well as what they accomplished and what reading strategies they used. The Lab Director will lead the discussion about today’s results. Discuss what your team learned about its outdoor organism. Which reading strategy did the team use? How did it help the team? What other problems did the team encounter? How did the team resolve those problems?* (While teams are working together, walk around the room to facilitate as needed.)

2. *The Data Scientist will now share with the entire class either something the team learned about their outdoor organism, a reading strategy, or how the team solved a problem. (Try to encourage teams to share a variety of things—you do not want just facts about outdoor organisms, just mini-lesson reading strategies, or just cooperative learning strategies. If you saw a great example in action, encourage that team to share with the entire class.)*

## Guided Science Investigation (30–45 minutes)

### OVERVIEW

Learners participate in an outdoor scavenger hunt to find evidence of decomposition and/or decomposers in the yard.

### GUIDING QUESTIONS

Who are the decomposers that live outside our classroom? What evidence can we find that decomposers are present?

### BACKGROUND INFORMATION FOR THE TEACHER

Decomposition releases carbon and nitrogen into the air, land, and water, providing nutrient cycling essential for continuing life on Earth. Decomposers break down these nutrients from plants and other organisms. Decomposers may or may not be readily seen; however, decomposition takes place everywhere in nature!

Decomposers we can find outside our classroom and in gardens, yards, or soil include earthworms, millipedes, burying beetles, termites, snails, and slugs. We can also find mushrooms or moss!

### MATERIALS

#### Each team needs:

- 1 ziplock bag with materials (each bag will contain enough hand lenses, gloves, dry-erase markers, craft sticks or plastic spoons, and “Decomposers in the Garden” picture documents for each team member)
- goggles

#### Teacher needs:

- “Decomposers in the Garden” picture document
- “Safety Rules for the D-Hunt” document
- hand lenses
- craft sticks or plastic spoons
- dry-erase markers
- gloves
- goggles
- gallon ziplock bags
- chart paper
- marker(s)

## SAFETY

- Review “Safety Rules for the D-Hunt” with the class.
- **Check the area you will conduct the scavenger hunt in ahead of time to avoid potential learner allergies to insects and/or outdoor vegetation!**

## SETUP

### Before the class:

- Survey the area around the school or classroom where you will conduct the D-Hunt to ensure that it is safe (i.e., free from ant mounds, trash, potential trip areas, thorny vegetation, etc.)
- Make copies of the “Decomposers in the Garden” picture document (1 per learner, or teacher can decide to pair up learners from the team; **however**, each learner will have his or her own equipment.)
- Laminate the “Decomposers in the Garden” picture documents to allow kids to check off the pictures with a dry-erase marker if they find the decomposers. Alternatively, you can place the documents in sheet protectors instead of laminating!
- Prepare ziplock “D-Hunt” bags, 1 for each team. Each bag will contain enough hand lenses, gloves, dry-erase markers, craft sticks or plastic spoons, and “Decomposers in the Garden” picture documents for each team member. Goggles can be distributed separately.
- On a sheet of chart paper, make columns with the names of the decomposers included on the “Decomposers in the Garden” picture document. After the D-Hunt, the class will report on what they observed and the teacher will tally up the results on this sheet.

## DAILY OBSERVATIONS

Pill bug observations have ended.

## PROCEDURE

### Engage

1. Announce, *Today we’re going on a D-Hunt! What’s a D-Hunt? Looking for decomposers!* At this point, the teacher can assign partners within the teams who will work together.)
2. Ask the Equipment Directors to collect the prepared D-Hunt scavenger bags, 1 per team.
3. Instruct the teams to find and take out the “Decomposers in the Garden” picture document. Review all the images with the class. **Up to this point, pill bugs have not been identified as decomposers. Listen for children to bring up questions or comments about pill bugs!**
4. Explain that if they find a decomposer, they will check the box next to the picture of it.
5. Let them know that they may not find all the decomposers on the list and assure them that this is okay!
6. Ask, *Where do you think we might find decomposers? What evidence will we look for that can tell us if there are decomposers around?* (Dead leaves, plants, or insects tree bark, etc.)
7. Read and discuss the “Safety Rules for the D-Hunt” with the class.

### Explore

1. When ready, lead the class to the designated hunt area and reinforce for learners the location boundaries you have set. Let them know that they will have 10–15 minutes for the hunt. (The teacher may allow more time if needed.)
2. The teacher should walk among the learners to ensure their safety and compliance.
3. When time is up, return to the classroom for a debrief!

### Explain

1. Upon their return to the classroom, seat learners in their teams for the debrief. Ask the Data Scientist from each team to report on the number of decomposers each team recorded as you write their results on the chart paper.
2. If learners report not seeing any, ask, *Why do you think you didn't see any?* Accept responses. *Where could they have been?* (Possibly underground or hiding under something?)
3. After all teams have reported, ask, *Would anyone like to share any other information or questions regarding the hunt?*
4. Explain, *Even if you didn't see the decomposers, they were there somewhere. Did you find any evidence or clues that decomposers were in the area?* Accept responses. (Suggest decaying vegetation or leaf litter, rotting or decaying matter, snail trails, etc.)
5. Remind learners that decomposers are nature's recyclers and have the important job of making sure that our food chains have all the nourishment (nutrients) needed to keep life going on Earth.

### Elaborate

1. Ask learners if they have seen or read about decomposers in the research they have been doing. Give volunteers time to share what they have learned.
2. Remind learners that regardless of the environment (water, land) there are decomposers present in all of them.

### Evaluate

1. Did learners identify decomposers using their data sheets?
2. Did they raise new questions about the role of decomposers or decomposition?
3. Did they use new science language in their communications?
4. Were any connections made about pill bugs as decomposers and the science investigation?

## Science Language

- A **food chain** describes the sequence of who eats whom that transfers energy between organisms.
- **Producers** make their own food from simple substances and energy from the Sun. Plants are producers.
- **Consumers** cannot make their own food. They get their energy from eating producers and other consumers.
- **Decomposers** eat or break apart dead plants and animals, recycling nutrients that plants need for growing.
- Living things use **energy** from food to help them move, grow, and survive.
- **Nutrients** are the nourishments and substances found in food that help organisms survive and grow.
- **Decay** is the process of rotting or **decomposition** that breaks down material when an organism dies.
- **Bacteria** are organisms so small they can only be seen through a microscope. Some are decomposers that break down dead organisms.
- **Fungi** are a group of decomposers that feed on decaying matter. Mushrooms are a type of fungi.

- **Evidence** is data collected from the investigation that supports (backs up) explanations and answers.

Expanded Standards
<p><b>Reading TEKS</b></p> <p><b>ELA.1.6E:</b> make connections to personal experiences, ideas in other texts, and society with adult assistance.</p>
<p><b>CCSS</b></p> <p><b>RI.1.3:</b> describe the connection between two individuals, events, ideas, or pieces of information in a text.</p>
<p><b>NGSS</b></p> <p><b>1-LS1-2:</b> Connections to Nature of Science: scientists look for patterns and order when making observations about the world. <b>1-LS3-1</b> Science &amp; Engineering Practices: make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.</p>
<p><b>Science TEKS</b></p> <p><b>2018–19: 1.2C:</b> collect data and make observations using simple equipment such as hand lenses, primary balances, and non-standard measurement tools. <b>1.2D:</b> record and organize data using pictures, numbers, and words.</p> <p><b>2024–25: 1.1E:</b> collect observations and measurements as evidence. <b>1.1F:</b> record and organize data using pictures, numbers, words, symbols, and simple graphs.</p>