

## Day 9: Eating out in the Garden

-  **Mini-Lesson** The teacher models how to determine the main idea of a text as the class creates an anchor chart together.
-  **Inquiry Circles** With many questions answered, teams determine what other work needs to be done on their Inquiry Charts.
-  **Guided Science Investigation** Children participate in an interactive game to learn about producers and consumers in an ecosystem and the transfer of energy in a food chain.

<b>Literacy Strategy:</b> identifying the main idea of a text.	<b>Reading TEKS</b> ELA.1.6G	<b>CCSS</b> RI.1.2
<b>Science Concept:</b> organisms depend on each other for energy transferred through food chains.	<b>Science TEKS</b> <b>2018–19:</b> 1.2C, 1.2D, 1.9C <b>2024–25:</b> 1.1E, 1.1F, 1.12C	<b>NGSS</b> LS1-C

**Science and Literacy Connection:** When authors don't tell us what the main idea of the text is, we must determine this for ourselves. During an investigation, we need to figure out what the most important information is from our observations.

### Mini-Lesson (15 minutes)



#### OVERVIEW

When scientists are researching a topic, they must decide what the most important part of what they read is. When we do this, we are determining the main idea. This mini-lesson teaches children how to begin to determine the main idea of a text.

**Note:** You are encouraged to create a "Main Idea" 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)
- class Inquiry Chart about pill bugs
- “Main Idea” anchor chart as a model
- selected 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. *Today we will practice determining the main idea of a section as we read about our outdoor organisms and their environment. The main idea is the most important thing the author wants us to know about his or her topic. Recognizing the main idea is sometimes called “getting the gist” of what we are reading.*

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

1. *Sometimes authors tell us the main idea. They usually do that in the first or last sentence of a section, but not always. Sometimes, they leave out the main idea and make us (as readers) work to figure it out. As a strategic reader, I will do this after each paragraph or section in the text I am reading. I do this because it makes my reading clear and helps me remember what I read.*

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

1. *The first thing I need to do is think about the topic (pill bugs) and what I already know about the topic. (This could be information from inquiry circle time or during the scientific investigations.)*
2. *Next, I will draw a conclusion about what the author wants me to know about pill bugs—that is, I’ll take what I already know about the topic and then I’ll combine that with the most important details the author is telling me. (The teacher will model this while reading a section of text about pill bugs.)*
3. *Now, I have to put all these things together to get the main idea. I will think, “What would the author tell me was the most important idea from the reading if he or she were standing here next to me?”*
4. *I will put the main idea in my own words and record it on the Inquiry Chart.*

## Science Inquiry Circles (30 minutes)

## OVERVIEW

Today, learners will continue to work in inquiry circle teams to investigate new questions or add more information about outdoor organisms from other resources.

## 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)

## PROCEDURE

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

### Before Inquiry Circles

1. *It is time to get into our inquiry circles. We will practice our roles as scientists with the same team as yesterday as we explore our outdoor organisms.*
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 team Inquiry Charts.* (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 in teams.* (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.*
2. *The Lab Director will lead the discussion about today’s results. Discuss what the 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.)
3. *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 interactive game to learn about the transfer of energy in a food chain.

### GUIDING QUESTIONS

What is a food chain? What are the components of a food chain? How is energy passed on through a food chain?

### BACKGROUND INFORMATION FOR THE TEACHER

Scientists study how living and nonliving things interact in many different environments. Those environments support ecosystems unique to their surroundings in which communities of organisms form food chains and food webs that provide the energy transfer necessary for the survival of life.

The organisms that make up an ecosystem are identified as producers, consumers, and decomposers. The link between them and their environment is important for the flow of energy and nutrients. Producers (plants) use energy from the Sun to make their food. This energy is transferred as consumers eat plants or other consumers. Decomposers eat or break down dead plants, dead animals, and animal waste, which provides them a source of energy. In the process, decomposers return important nutrients back into the food chain and any remaining energy is dissipated in the form of heat. Decomposers includes fungi, bacteria, and invertebrates such as worms and insects.

### SAFETY

Lab Directors should remind the learners to follow the rules for observing pill bugs.

### MATERIALS

**Each team member needs:**

- pencil
- “Pill Bug Investigation” journal
- 1 image from the “Eating out in the Garden” script

**Teacher needs:**

- “Eating out in the Garden” script
- “Eating out in the Garden” images (sun, plants, snails, robins, hawks, earthworms)

### SETUP

**Before the class:**

- Pre-read the “Eating out in the Garden” script.
- Copy and cut out “Eating out in the Garden” images. (The teacher will need to have **one image of the Sun** and **multiple images of plants, snails, robins, hawks, earthworms**—enough for the class to each have a role.)

- Plan a floorspace or outdoor space that will accommodate your class as they act out the story. They will be moving around!

### DAILY OBSERVATIONS

Remind learners that this is Day 4 for making observations of their mini-habitats and recording data in their science notebooks. Observations can be made any time of the day as long as they are made daily.

### PROCEDURE

#### Engage

1. Announce to the class that you have a fun story to act out today called “Eating out in the Garden”!
2. Explain that it will be an active story and that they will need to move around. However, stress that at no time should they run or push on each other. This will be a good time to share any safety rules that may apply.
3. Randomly hand out the images. As you do, identify them. (*You will be the Sun; you will be a plant, etc.*)
4. Let them know that you have made enough images so that everyone can participate at one time.

#### Explore

1. Ask them to listen carefully to your story so that they will know just when to move. Explain that you will let them know who moves first and they should stay seated until they hear their animal or plant called.
2. To begin, everyone should be seated, preferably on the floor or outdoors.
3. Begin reading the story script slowly.

#### Explain

1. **At the end of the story, ask everyone to sit right where they were standing.** Ask, *Who would like to explain what the main idea of the story was?* Accept responses. Prompt them by having them look at where they are sitting—they should still be in the order they stood in.
2. Ask, *Who can tell me what a producer is? What is a consumer?*
3. After they have shared their ideas, explain that they have formed what is called a **simple food chain**. Add, *A food chain describes the sequence, or the order, of who eats whom that transfers, or passes, energy between organisms.*
4. Review the sequence of events, asking, *What was the first step in this food chain?* (The Sun.) *Why is the Sun important?* (This is where all the energy for living things begins.)
5. Ask, *What happened next?* (The plants grew. Light energy allowed the plants to make their own food to grow.)
6. *What happened to the energy that came from the Sun?* (It was transferred into the plants.)
7. *What happened next?* (A snail, or consumer, ate the plants, or producers.)
8. *Now what happened to the energy from the Sun?* (Some of it was transferred to the snails.) Continue through the food chain in this manner, adding that part of the energy that began with the Sun is transferred as each organism eats the other.
9. Explain to learners that they have just acted out how a food chain transfers energy as one organism eats another. Tell them, *This is how organisms get their nourishment (nutrients) and energy to grow and survive!*

10. Explain, *Food chains are made up of producers and consumers in all types of environments, or ecosystems. Who are the producers in our food chain? (Plants.) Who are the consumers? (All the other organisms.)*
11. Add that although each organism in our story ate only one thing, in real life consumers eat many other things as well, just as humans like to eat many different types of foods!
12. Someone may ask, “Who eats the hawk?” Tell them that only a few animals eat hawks, among them eagles, bigger hawks, owls, and even racoons if they have a chance.
13. Ask, *What part do earthworms play in this food chain? Why were they everywhere? What do they eat?* Accept all responses. Ask, *Do you ever wonder what happens to all the plants and animals that die in nature? Do they just pile up everywhere?* Accept all responses.
14. Explain that earthworms belong to a special team of consumers called “decomposers.” *Decomposers are like a “cleanup crew”—they eat or break apart dead and decaying (rotting) organisms and waste products, and, when they poop, they return or recycle important nutrients back to the soil so that producers, or plants, can grow! Decomposers have a very important job in a food chain because they keep it going!*

### Elaborate

1. Share that earthworms are only one of a group of organisms called decomposers. The group also includes fungi (like mushrooms), very small microscopic bacteria, and invertebrates such as worms and insects. Ask, *Has anyone read or seen any information about earthworms or other decomposers as you worked in your inquiry circles?*
2. The teacher may choose to extend the learning by making an anchor chart of images from the story “Eating out in the Garden” and labeling the components as producers, consumers, and decomposers.

### Evaluate

1. Did learners communicate a reasonable understanding about the components of a food chain (producers, consumers, decomposers)?
2. Did they communicate a reasonable understanding of, or ask questions about, the transfer of energy in a food chain?
3. Did they use new science language appropriately?

## 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.
- **Nutrients** are 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.

## Expanded Standards

### Reading TEKS

**ELA.1.6G:** evaluate details to determine what is most important with adult assistance.

### CCSS

**RI.1.2:** identify the main topic and retell key details of a text.

### NGSS

**LS1-C:** Disciplinary Core Ideas: All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.

### Science TEKS

**2018–19: 1.2C:** collect data and make observations using simple equipment such as hand lenses, primary balances, and non-standard measurement tools. **1.2D:** record and organize data using pictures, numbers, and words. **1.9C:** gather evidence of interdependence among living organisms such as energy transfer through food chains and animals using plants for shelter.

**2024–25: 1.1E** collect observations and measurements as evidence. **1.1F:** record and organize data using pictures, numbers, words, symbols, and simple graphs **12.C:** identify and illustrate how living organisms depend on each other through food chains.