

## Day 6: What Kind of Information Will I Collect?

- 
**Mini-Lesson** Children learn how to read web-based texts for specific information as they create an anchor chart with the teacher.
- 
**Inquiry Circles** Children use a website to continue work on their Inquiry Charts, answering new questions or adding additional information to questions they are still working on.
- 
**Guided Science Investigation** Children will make their first observations on their investigations and begin recording information in their journals.

<b>Literacy Strategy:</b> reading for specific information on a website	<b>Reading TEKS</b> ELA.1.9F	<b>CCSS</b> RI.1.10
<b>Science Concept:</b> scientists know that collecting information through observations and measurements may provide the evidence they need for making explanations and answering questions.	<b>Science TEKS</b> <b>2018–19:</b> 1.2C, 1.2D <b>2024–25:</b> 1.1E, 1.1F	<b>NGSS</b> 1-LS3-1, 1-LS2-1
<b>Science and Literacy Connection:</b> scientists look very carefully for facts or information during an investigation or research because they know it can be used as evidence to explain and support their answers.		

### Mini-Lesson (15 minutes)



#### OVERVIEW

When doing inquiry, we must remember to think, talk, and read like a scientist. A scientist will use many different resources when researching information. In many cases, a scientist will read texts on the Internet to get the most up-to-date information. This mini-lesson teaches children how to read web-based texts (e.g., on the Internet) for specific information.

**Note:** You are encouraged to create a "Reading for Specific Information on a Website" 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)
- “Reading for Specific Information on a Website” anchor chart as a model
- class Inquiry Chart about pill bugs
- website 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 and considerations are in parentheses.

### EXPLAIN THE STRATEGY

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

1. *Our strategy today will be about reading for specific information on a website. I will use many resources while exploring my outdoor organism, such as books, videos, and websites.*

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

1. *I know to use this strategy (reading for specific information on a website) because sometimes the books I have available may be outdated or simply do not include what I am looking for. When this happens, I can get more information on the Internet.*
2. *As a strategic reader, I will scan the website because I do not need to read every word when I am looking for specific information. Just like when I scan a page in a book, this strategy is important because it saves me lots of time.*
3. *As a strategic reader using a website, I will always use websites I can trust. Therefore, I will only use a website that my teacher has approved. (Before allowing your learners online, you may want to make sure that the suggested websites are not blocked by your school district. You may also choose to bookmark the websites on your browser. You may also want to use district-purchased websites. Many websites have text-to-speech options that may be used to scaffold for your learners.)*

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

1. *The first thing I will do is think about what I need to research today!*
2. *Now, I will look at my Inquiry Chart to determine what specific information I need to locate. Since we have been exploring our outdoor organisms for a couple days, my Inquiry Chart will help me know what data is missing. (Using the class Inquiry Chart about pill bugs, model how you can look at the missing parts in the chart to determine what to examine today.)*
3. *Then I think about a few key words I need to look for on the website. (Project for the class to see a chosen website about pill bugs that contains the missing information from your class Inquiry Chart.)*
4. *When I am on a website, the first thing I do is check to see if I can believe what is on the website. Since I am only using websites that my teacher approved, I know I can trust the information. If I look for information at home, I will ask my parent or guardian for help knowing a website is safe.*
5. *I must remember to scan the entire page on the screen. Just like in a book, the text features are important and can lead me to valuable information. (Point out captions, bold words, subtitles, etc., on the webpage.)*
6. *If I do not find the information I need, I should try another website.*

7. *While scanning, I may see a hyperlink that I can click on for more information. If my mouse turns from an arrow to a hand, I know this is something I can click on. Sometimes the hyperlink will be words that are colored or bold, and other times it may be a picture or icon. I may also see short videos to play.*
8. *Sometimes websites have extra information that I should ignore. This could be advertisements, videos (not about my research topic), and even pop-ups. I should ignore them.*
9. *If I find myself on a website that is not useful, I can use the back button at the top of my browser to get back to the website where I started. (Alternatively, you could have websites bookmarked and have learners return to the correct place using the bookmark.)*
10. *Once I find the specific information I need, I must remember to record it on the Inquiry Chart. That includes the URL for the website I used. (Model for learners finding the information about pill bugs on the website. You may also need to model where to find the URL on the webpage and where to record it on the Inquiry Chart.)*
11. *This is a strategy I will use every time I read for specific information on a website. (During inquiry circles, you may have some teams working online while others are working with traditional texts.)*

## Science Inquiry Circles (30 minutes)

### OVERVIEW

Today learners will explore websites to find information and answers to their questions using the strategies they learned during the mini-lesson. The teacher should encourage team members to help each other with navigating the websites, and provide support as needed.

### MATERIALS

#### Each team needs:

- pencils
- team Inquiry Charts
- 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
- “Reading for Specific Information on a Website” anchor chart made in class

### 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. *You will be with the same team as yesterday, but we will rotate the scientific roles. (Assign roles at your discretion and have the Equipment Directors gather the inquiry chart for their team).*
2. *Yesterday, we answered more of our Inquiry Chart questions. Some of you completed an entire column and others started to answer more than one column. (This may or may not be true for your class. Please adjust as needed.)*

3. *Today we will answer more questions or add additional information from a website.* (Refer to the “Reading for Specific Information on a Website” anchor chart, reminding learners about the discussion during the mini-lesson on how to use a website. If you do not have enough technology for all teams to use the Internet at once, you may rotate them between technology and traditional texts.)
4. *Now, teams will work together on their Inquiry Charts.* (Be sure to display the class Inquiry Chart as a model.)

#### **During Inquiry Circles (20 minutes)**

1. *Today, you may use a different resource to add to a question you’ve already started to answer, or you may answer a completely different question. Do not forget that it is important to record your resources on the Inquiry Chart as you complete it.* (Remind learners that the class Inquiry Chart about pill bugs 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. (At this point, teams might have information under multiple questions and from multiple sources. You may need to remind teams that information in the same **row** is from the same source and information in the same **column** pertains to the same question. One source might answer multiple questions.)
3. *Remember, we have anchor charts to help guide your thinking. Do not forget to use them!* (Refer to the “Inquiry Toolbox,” “Monitoring Comprehension,” and “Fix-up Strategy” anchor charts. Remind learners that even though the mini-lesson today was about reading on the Internet, we still monitor our reading and use fix-up strategies.)
4. *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, making note of their progress and offering guidance 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 literacy strategies they used. The Lab Director will lead the discussion about today’s results. Discuss what the team learned about its outdoor organism. How did the team feel about using a website versus a traditional text? Did team members monitor their reading comprehension? If your team came across a reading problem, which fix-up strategy did team members use? 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, which fix-up strategy they used, 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 fix-up 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 discuss what kind of information they will be looking for in their investigations, then they will make their first observations and record them in their journals.

### GUIDING QUESTIONS

What information do I need to answer my question? How will I collect the information? Where and how will I record it?

### BACKGROUND INFORMATION FOR THE TEACHER

Scientists know that collecting information through observations and measurements may provide the evidence they need for making explanations and answering questions. Documenting the information they collect is important because the next step will be to make sense of the information and determine if they have answered their questions or if they need to conduct more investigations.

### SAFETY

Remind the learners not to open the habitat lids and to handle the habitats gently without shaking. Remind learners of the rules for observing pill bugs.

### MATERIALS

#### Each team member needs:

- pencil
- “Pill Bug Investigation” journal

#### Each team needs:

- team mini-habitat
- pre-cut food choices selected by the team
- hand lenses

#### Teacher needs:

- foods selected by teams
- camera
- chart paper
- marker(s)

### SETUP

#### Before the class:

- Pre-cut the food chosen by the teams and place on small paper plates marked with the team identifier. (Each habitat will only need a small portion: 2–3 small pieces.)
- **The teacher will need to take a closeup picture of what the food looks like today (Day 6) and on Day 10 when final observations are made. The pictures will be used in the culminating project.**
- On a sheet of chart paper, make an enlarged version of the **Day 1** page in the “Pill Bug Investigation” journal to model with.
- Place hand lenses in same location as mini-habitats.

## DAILY OBSERVATIONS

Teams will make their first observations today! They will look at what the pill bugs are doing and describe what the food looks like today. Give children time to observe their organisms and record their observations in their science journals. Facilitate team discussions by asking questions, such as “What did you notice? Has anything changed since the last time you observed your organisms?” **Observations can be made at any time of the day, as long as they are made daily.**

## PROCEDURE

### Engage

1. Ask the Equipment Directors to distribute the “**Pill Bug Investigation**” journals. Announce to the class, *Today you will add the food you have chosen to the habitats. Then, you will make your first observations.*
2. Ask, *What kind of information are we going to be looking for as we make our observations?* Answers will vary (to see what the pill bugs are doing, to see if they are eating their food, etc.). Accept all responses.

### Explore

1. Distribute the small plates of food to each team. Direct the Lead Scientist to add the food bits carefully to the habitats.
2. Instruct the class to open their journals to the **Day 1** page where they will document their observations. Using the enlarged version on chart paper, point out the space where they will write the date (the date should be posted or written where they can see it to copy). Explain, *It is very important to date the observations in a science journal—scientists always date their notes and observations in an investigation. It is a way to organize the information and to track any changes over time.*
3. Next, *Remember you will make observations every day and enter information in your journals.* Point out question #1: “**What did you see the pill bugs doing today?**”
4. Read the sentence stem aloud: “**Today the pill bugs are...**” Ask, *How would you finish this sentence? What kind of information might you write here?* (Moving, sleeping, eating, etc.) Ask, *Why might that be important?* Accept all responses.
5. Draw their attention to the blank space next to the sentence stem. Explain that they will also draw a picture to show what the pill bugs were doing each day.
6. Point to question #2: “**Describe what the food in the habitats looks like today.**” Ask, *Why is it important to write about what the food looks like?* (Because they are tracking changes in the food in their investigation.) Accept their responses.
7. Then, read the sentence stem “**Today I noticed that the food...**” Ask learners, *What might you notice over the next few days?* (Is it bitten? The same? Missing? Changing color? etc.) Add that there is another space to draw what they see.
8. Let the class know that they will be writing about and drawing their observations every day for 5 days total, including today. As scientists, they need to make careful observations and recordings!
9. At this point, ask the Equipment Directors to bring the mini-habitats to their teams.
10. Tell the class that today they will have 15 minutes to make their observations and write and draw in their journals. Let them know that you will be walking around to answer any questions they may have.
11. As the teams work, listen for their ideas, observations, and reasoning. Accept their observations. Offer guidance in the form of questions, such as, *How do you know? What do you see? How can you tell? How would you describe that?*

### Explain

1. When time is up, ask the Equipment Directors to collect the mini-habitats and return them to the designated area. Lab Directors should make sure the area is clean.
2. Ask the Data Scientists from each team to briefly report on what the team observed.
3. Ask the class if they have any new questions to add to the “**What we want to know about roly-polies**” class list. Let them know you will revisit the list to see if they have answers to all their questions at the end of their investigations!

### Elaborate

1. Tell learners that the information, or data, they collect as they observe the pill bugs will be used as *evidence* that supports an answer to their question.
2. For example, the evidence might be that the food they chose is all gone. Ask, *If the food is all gone, what does that tell us?* (The pill bugs liked the food?) *What if they don't eat it at all?* (Maybe they don't like it?) Whatever they observe will be their evidence, or clue(s), about what pill bugs eat.

### Evaluate

1. Did learners demonstrate an understanding of what kind of information they need to collect?
2. Did they record their information in the journals?
3. Did they use any new science language in their communications?
4. Were any new questions raised?

## Science Language

- A **testable question** can be answered by conducting an investigation or experiment.
- A **scientific investigation** is a plan for finding answers to questions and solving problems.
- **Evidence** is data collected from the investigation that supports (backs up) explanations and answers.
- **Data** are facts and information (such as images, words, and measurements) collected during an investigation.

## Expanded Standards

### Reading TEKS

**ELA.1.9F:** recognize characteristics of multimodal and digital texts.

### CCSS

**RI.1.10:** with prompting and support, read informational texts appropriately complex for grade 1.

### NGSS

**1-LS3-1:** Science & Engineering: use information from observations (firsthand and from media) to construct an evidence-based account for natural phenomena. Connections to the Nature of Science: scientists look for patterns and order when making observations about the world. **1-LS2-2** Science: uses drawings, sketches, and models as a way to communicate ideas.

**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.

**2024–25: 1.1E** collect observations and measurements as evidence. **1.1F** record and organize data using pictures, numbers, words, symbols, and simple graphs.