

DAY 7 Why Do Living things Need Each Other??			
Literacy Strategy: Using Internal Text Features		Science Concept: Plants and animals need each other for survival.	
Reading TEKS: 1(4)(14)(D)	CCSS: RI.1.5	NGSS: 1-LS1-1, 1-LS1-2	Science TEKS: 1(9)(B)(C), 1(10)A
Materials for Mini-lessons on Science-specific Disciplinary Literacies (referred to as Mini-lesson): Text to model strategy, anchor chart			
Materials for Science Inquiry Circles: team inquiry charts, pencils, nonfiction texts for each team, preselected videos or online books			
Materials for Science Investigation: See lesson			
Content Vocabulary: Interdependence- depending on and needing each other for survival Food chain- sequence of whom eats whom in an ecosystem that provides the transfer of energy between organisms Habitat – the natural home or environment of living things Ecosystem - a group of living organisms interacting with each other and their non-living environment			
Science and Literacy Connection: Scientists use the text features in reference materials while doing research because it is easier to find information, and sometimes, only specific parts of the text are needed to answer their question(s).			

Mini-lesson — 15 minutes

OVERVIEW

Scientists use the text features in reference materials while doing research. Most of the time you will only use parts of the text to answer your research question. Internal text features such as the table of contents, index, headings, bold print words, and pictures can help you locate information more quickly when reading. You may also use text features like captions and graphs to give you additional information about a topic.

This Mini-Lesson teaches children how to use text features found in informational texts.

PROCEDURE

Declarative Knowledge (Tell them what the strategy is that they are learning)

1. Say something like, “Our strategy today is called using text features. Text features are the table of contents, index, headings, bold words, etc.”

Conditional Knowledge (Tell them when and why you know to use the strategy)

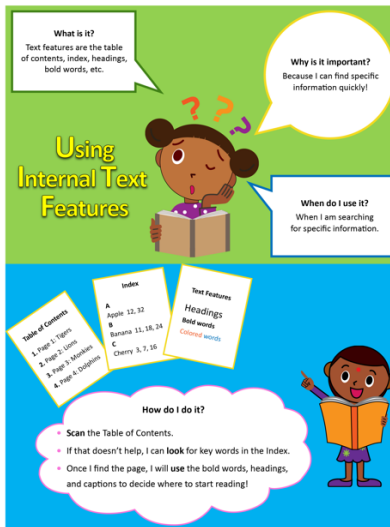
2. Say something like, “I use text features when I am searching for specific information in many texts and websites. I will do this because I don’t want to read a text from cover to cover and I can locate specific information quickly.

Procedural Knowledge (Tell them the steps to using the strategy)

3. Say something like (while you model the strategy), “The first thing I will do is scan my eyes over the table of contents to see which page may have the information I am researching about my

topic. *It is suggested that you model looking at the Inquiry Chart for missing information and then scanning the table of contents for that information.*

4. Now, if the table of contents does not help me, I can think of keywords and look in the index. I must remember that the index is found in the back of the book and is in alphabetic order like a dictionary. I will scan for the word I am looking for and then find all the pages that have that word.
5. Once I know what page I need, I will use text features like bold words, colored words, headings, and captions to determine where I need to start reading.



Practice in text (print, video, or interview)

Post the anchor chart in your classroom so students can refer to it while in their inquiry circles. Encourage scientists to use the strategy during in their Inquiry Circles.

Science Inquiry Circles — 30 minutes

OVERVIEW

Scientists work in teams when conducting research and experiments. Each day of this unit, students will work in inquiry circle groups while embodying the role of a scientist. They will do so by taking on roles of scientists in research by speaking like a scientist, reading like a scientist, and writing like a scientist.

PROCEDURE

Before Inquiry Circles

Before Inquiry Circle Groups (5 minutes):

1. Say something like, "It is time to get into our inquiry circle groups. You will be with the same research team as yesterday."
2. Say something like, "When we research organisms, we will practice our roles as scientists. We will do this because scientists have a special way in which they observe the world, read scientific texts, and write reports. There is no better way to learn about science than to become a scientist!"

During Inquiry Circles — 20 minutes

3. Say something like, "We have anchor charts to help guide your thinking. Do not forget to use them while in groups." (*Refer to Inquiry Tool Box anchor chart and the daily anchor chart. Remind students that they can use all the reading strategies taught, not just the one for that day.*)

4. My role is to help guide the inquiry circle groups, but I expect you to work as a scientific team to solve your problems together.

5. Do not forget to answer your research questions and record it on the inquiry chart. It is important to record your sources on the inquiry chart as you complete it." (Be sure to explicitly explain how students should use the chart.)

While groups are working together, walk around the room to facilitate as needed.

After Inquiry Circles — 10 minutes

6. Say something like, "As we are concluding our inquiry circle groups for today, each group will have a chance to share what they accomplished and learned."

7. "The Lab Director should lead the discussion with their inquiry circle group about today's results. For example, what did you learn about your organism? Which reading strategies did you use? What problems did you encounter? How did you resolve those problems?"

8. "The Data Scientist will now share with the entire class either something the group learned about their organism, which reading strategy(ies) were used, or how the group solved a problem."

Science Investigation — 30 -45 minutes

OVERVIEW

Students discover how plants and animals depend on each other for survival as they listen to the story "A Log's Life".

GUIDING QUESTIONS

Why do living things need each other? What is interdependence?

BACKGROUND INFORMATION

Students have prior knowledge about the needs of living things. Now they are introduced to the concept of interdependence by associating the term with the idea that plants and animals need each other for survival.

Using the context of the story about a tree, they learn about the complex relationships between organisms.

SAFETY

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

OBSERVATIONS

Remind students that this is Day 2 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.**

MATERIALS

- Chart paper
- Science investigation journals
- Inter/dependence placards
- Book “A Log’s Life”

SET UP

Before the class:

- Label a sheet of chart paper “Examples of Interdependence”

PROCEDURE

Engage

1. Gather the students and announce that you have another big word to introduce today!
2. Explain that this word has 2 parts. Hold up the placard with “INTER”. Tell them that inter means “between”. Then, hold up the placard with “DEPENDENCE”. Say that dependence means that something or someone “relies or depends” on something or someone else.
3. Put them together and you have the word “*interdependence*”- connection or relationship between things that depend on each other.
4. Tell them that today we will explore how plants and animals **depend on or need each other to survive**.
5. Post the interdependence placards where students can refer to them later.

Explore

6. Tell the class you have a story to share with them, “*A Log’s Life*”.
7. Ask them to listen carefully as you read so that you can discuss it afterwards. Read, or project the audio book

Explain

1. After the story, ask, “Who can name some of the organisms in the story?” (Accept all responses and record on chart paper.). The teacher may clarify any misconceptions by reading passages from the text or showing illustrations in the book during the following discussion.)
2. “Are we researching some of these organisms? Which ones?” (Check mark those.)
3. Remind the children that organisms are living things. Ask, “Is the oak tree in the story an organism too?” “What kind of organism is it?” (a plant)
4. “Who can tell me how the oak tree provided what the other living things in the story needed?”. (Ex: habitats, food for others) Write responses on chart paper. Most will readily offer that it provided a place to live or that its leaves/acorns provided food.
5. Prompt them to consider, “How did the other organisms in the story provide food for each other?”. (Ex: What did the woodpecker eat? What did the millipede eat? Etc.)
6. “What happened to the tree in the storm?”
7. “What happened when the tree became rotten?” (Refer back to the pages in the book : Animals moved out; it was broken down and eventually became soil through the action of living things - decomposers)
8. How did a tree begin to grow again? (When the decomposed tree was broken down and became soil, it provides just what the acorn needed to grow another tree!)

Elaborate

9. After the book discussion, ask the class: “Who has a pet at home? “
10. Tell them that regardless of what kind of pet they have, all pets have needs and care that you (the owners) provide for them. Ask for ideas about what those needs are (food, a place to be, water, air. Some may also include medicine and grooming.) Accept all responses.
11. Then ask: “Can your pet do any of this for him or herself?” Listen to their ideas.

12. Explain that pets **depend** on the caregivers to provide for them. They are **dependent** on us so that they can survive or live. Ask if they think the pill bugs are dependent on us. If so, how?
13. Remind them that **interdependence means depending on and needing each other for survival**.
14. Do we depend on our pets to survive or live? (Do they feed us, clean up for us? etc.) Some may say that they guard or protect us; or give us companionship and love. Explain that while those are very important to us, they are not necessary for us to survive or live. (What do people without pets do??)
15. Let them know that tomorrow you will look at some more examples of how organisms depend on and need each other to survive.

Evaluate

16. Did students offer reasonable explanations of why living things need each other?
17. Did students communicate an essential understanding of “interdependence”?

Expanded Standards

Reading TEKS: 1(4)(14)(D) Reading/Comprehension of Informational Text/Expository Text. Students analyze, make inferences and draw conclusions about expository text and provide evidence from text to support their understanding. Students are expected to: (D) use text features (e.g., title, tables of contents, illustrations) to locate specific information

CCSS: RI.1.5 Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.

NGSS: 1-LS1-1 Disciplinary Core Ideas- All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. 1-LS-1-2 Science & Engineering Practices-Read grade appropriate texts and use media to obtain scientific information to determine patterns in the natural world.

Science TEKS: 1(2) (C) collect data and make observations using simple equipment such as hand lenses, primary balances, and non-standard measurement tools; (D) record and organize data using pictures, numbers, and words; and (E) communicate observations and provide reasons for explanations using student-generated data from simple descriptive investigations. 1(9) Organisms and environments. The student knows that the living environment is composed of relationships between organisms and the life cycles that occur. The student is expected to: (B) analyze and record examples of interdependence found in various situations such as terrariums and aquariums or pet and caregiver; and (C) gather evidence of interdependence among living organisms such as energy transfer through food chains and animals using plants for shelter. 1(10) Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments. The student is expected to: (A) investigate how the external characteristics of an animal are related to where it lives, how it moves, and what it eats