



Every Animal Needs Food

Introduction

Objective:

The class identifies the needs of each of the main characters and creates a list of how the need for water, shelter, and space is met. Using a quadrant chart, the students identify how Templeton, Charlotte, Fern and Wilbur obtain their food and what special structures they have to help them in that process.

Academic Content Standards:

✦ National Standards

- Science as Inquiry
 - Abilities to do scientific inquiry
 - Use data to construct a reasonable explanation
 - Communicate through investigations and explanations
- Life Science
 - Characteristics of organisms
- Science in Personal and Social Perspectives
 - Changes in environments

✦ Ohio Standards

□ Life Sciences

Students demonstrate an understanding of how living systems function and how they interact with the physical environment. This includes an understanding of the cycling of matter and flow of energy in living systems. An understanding of the characteristics, structure and function of cells, organisms and living systems will be developed. Students will also develop a deeper understanding of the principles of heredity, biological evolution, and the diversity and interdependence of life. Students demonstrate an understanding of different historical perspectives, scientific approaches and emerging scientific issues associated with the life sciences.

Benchmark A Discover that there are living things, non-living things and pretend things, and describe the basic needs of living things (organisms).

Grade 2 Indicator 1 Explain that animals, including people, need air, water, food, living space and shelter; plants need air, water, nutrients (e.g., minerals), living space and light to survive.

Indicator 5 Explain that food is a basic need of plants and animals (e.g., plants need sunlight to make food and to grow, animals eat plants and/or other animals for food, food chain) and is important because it is a source of energy (e.g., energy used to play, ride bicycles, read, etc.).

Benchmark B Explain how organisms function and interact with their physical environment.

Grade 2 Indicator 6 Investigate the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).

Grade 3 Indicator 2 Relate animal structures to their specific survival functions (e.g., obtaining food, escaping or hiding from enemies).

□ **Scientific Inquiry**

Benchmark A Ask a testable question.

Grade 2 Indicator 1 Ask "how can I/we" questions.

Indicator 2. Ask "how do you know" questions (not "why" questions) in appropriate situations and attempt to give reasonable answers when others ask questions.

Grade 3 Indicator 1 Select the appropriate tools and use relevant safety procedures to measure and record length and weight in metric and English units.

Benchmark B Design and conduct a simple investigation to explore a question.

Grade 2 Indicators 5 Use evidence to develop explanations of scientific investigations. (What do you think? How do you know?)

Benchmark C Gather and communicate information from careful observations and simple investigation through a variety of methods.

Grade 2 Indicators 10 Share explanations with others to provide opportunities to ask questions, examine evidence and suggest alternative explanations

Grade 3 Indicator 6 Communicate scientific findings to others through a variety of methods (e.g., pictures, written, oral and recorded observations).

□ **Scientific Ways of Knowing**

Benchmark C Recognize that diverse groups of people contribute to our understanding of the natural world.

Grade 2 Indicator 4 Demonstrate that in science it is helpful to work with a team and share findings with others.

Getting Started

Materials:

- Overhead and transparency
- Quadrant sheet for each student and as on overhead

Vocabulary:

- Basic need
- Energy source
- Structure
- Survival

Technology:

- Use a word processing program for the written explanations.
- Create the quadrant on the computer and use the monitor to display the information instead of the overhead.

Lesson

Orientation Activity:

1. Review the names and types of animals in the production. Make a list on the board.
2. Talk about the needs of each of the animals in order to survive. List these on the board as well. When food, water, shelter, air, space have been listed ask the

students for evidence from the production how the animals obtained shelter. As the students share, add these to the list. Continue with space and water. NOTE: Use a blank quadrant sheet like the food sheet to be used later to record this information as an example for the students if you like.

Learning Activity:

1. Tell the students that they will work to make a list of the evidence from the story that shows how food was obtained by the characters of Wilbur, Templeton, Charlotte, and Fern.
2. Handout the quadrant chart. Each student writes in the correct quadrant (section) how each character obtained food and/or what special structures it has for eating food (examples of food eaten and how it gets its food).
3. After a period of time, ask the students to pair up with a partner and share their ideas. If they hear one they like, they may add it to their individual chart. Walk around the room during these conversations and record some of the ideas on an overhead transparency of the chart. Write the student's name that made the comment next to the idea.
4. Call the class together again and place the transparency on the overhead. Tell the class that you heard some wonderful ideas. Share the ones that you wrote down, giving credit to the rightful "owner." Ask the students for additional ideas and record them with the student name on the overhead transparency.
5. Ask the students: How can we compare ...
 - Charlotte's web to a fisherman's net
 - Wilbur's "slops" to our dinner leftovers
 - Templeton's scrounging for food to a homeless person looking for table scraps
 - Fern eating lunch to you eating lunch at school
6. Ask the students:
 - How do we know that food is important to each of these organisms?
 - How can we tell what the food does for each of them?
 - What would happen if the food was eliminated from the environment?
 - What would each need to do in order to survive?
7. Ask each student to choose one of the characters from the production, Wilbur, Charlotte, Fern, or Templeton, and write about their need for food as an energy source and how that character goes about obtaining food in order to survive.

Evaluation and Follow-Up

Assessment Tools and Methods:

- Make observational notes of student group and communication skills.
- Check quadrant chart for accurate and thoughtful ideas relating to the assignment.
- Check individual written work for explanations of food as source of energy and also the structures/means that the character uses for obtaining food as a need for survival within the environment.

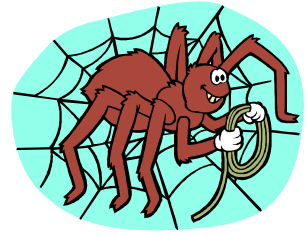
Interdisciplinary Connections:

Language Arts: Written work should follow standards as outlined for this time of the year. Take a writing grade as needed. Look for comparison between characters and self in written explanation.

Templeton



Charlotte

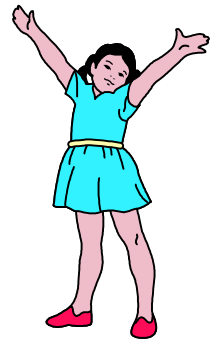


FOOD

Wilbur



Fern



Quadrant Sheet