

Walking Along a Food Web

GENERAL INFORMATION

THEME

Everything in nature is connected through a food web.

SUB THEMES

1. Both plants and animals must obtain energy to survive.
2. Every animal in an ecosystem plays an important role depending upon what it eats.
3. Food webs are fragile and when a piece is missing, the whole thing can fall apart.

VOCABULARY

Food chain, food web, producer, consumer, herbivore, carnivore, omnivore, scavenger, decomposer

ACTIVITY MATERIALS

Collection boxes, magnifying glasses, data sheets, pencils, clip boards

METHODS

INTRODUCTION

Introduce yourself and state the title of the activity. Preview the main points of the activity and give the students an idea of what they will be doing. Conversationally state the theme and sub themes. Ask: **How do living things obtain energy to live and function** (from food)? Explain that different living things obtain food in different ways. Some organisms, called producers, make their own food from sunlight. Ask: **What is an example of a producer** (plants such as trees, grass, and some non-plants like algae). Ask: **How do animals get food for energy** (animals called consumers eat or consume plants and other animals for energy)? Explain that there are different types of consumers based on what they eat. Ask: **What does an herbivore eat** (plants,; examples of herbivores in clued lady bugs, grasshoppers, mice, butterflies)? **A carnivore** (animals; examples include spiders, snakes, frogs, lizards)? **An omnivore** (eats plants and animals; examples include people, crows, some lizards)? **A scavenger** (eats dead animals; examples include snails and worms)? Ask: **What about decomposers? What do they eat** (they break down the remains of dead organisms; examples include mushrooms)? Think of scavengers as the garbage collectors of nature. Without them, we would have dead things all over the place! Explain that all of these different groups play an important role in the ecosystem and it is important to understand how everything is connected. Ask: **What is**

Teacher's Corner

Grade Level(s)

High School

State Performance Indicators

CLE 3210

- Inq.3: Determine appropriate tools to gather precise and accurate data.
- 2.1: Predict how population changes of organisms at different trophic levels affect an ecosystem.
- 2.4: Predict how various types of human activities affect the environment.
- 2.5: Make inferences about how a specific environmental change can affect the amount of biodiversity.
- 5.1: Compare and contrast the structural, functional, and behavioral adaptations of animals or plants found in different environments.
- 5.2: Recognize the relationship between form and function in living things.

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INTRODUCTION (cont.)

a food chain (it is the movement of energy from one organism to another; sunlight> seeds> mouse> snake)? **What is a food web** (multiple food chains intertwined in an ecosystem)? Describe a giant web making many connections between every insect, plant, and animal within an ecosystem.

ACTIVITY

Explain that the students are going to explore local food webs on their own. Break the group in to pairs of students and give each pair collection boxes, magnifying glasses, clipboards, pencils, and data sheets. Instruct them to collect examples of producers, consumers, and decomposers. They should complete their data sheets as they work. After 20-25 minutes, bring the group back together and go over the data sheets as a group. Encourage participation by allowing each group to present their collection to the rest of the group.

DISCUSSION

Review the following points: How do living things obtain energy to live? What are producers and how do they obtain food? What are consumers and how do they obtain food? What are some types of consumers and give an example of each? What role do decomposers play? What is the difference between a food chain and a food web? What role do humans play in a food web? What happens if people hunt too many consumers, such as wolves, or collect too many producers, such as wildflowers?

WRAP-UP

Have students return anything they have collected. Let the group know that the activity is coming to an end. Conversationally review the theme and sub themes. Collect the datasheets.

BRINGING IT TO THE CLASSROOM

Assign groups of students different ecosystems: ocean, lake, creek, rain forest, desert, etc. Have students research different plants and animals found in these ecosystems. Have them develop a food web for their ecosystem and depict it using poster board, markers, pictures, etc. Allow students to present their food web to the class.

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- Copyright © 2008 Healing Stones Foundation. All rights reserved.
- Activity developed by Melissa Squirlock; August 2007.
- Life Science. Chapter 20: The Earth's Ecosystems. Published by Holt, Rinehart, and Winston, Austin, 2001.