



## Food Webs: Interconnectedness of Organisms in Ecosystems

# Activity 1: Producers, Consumers, Decomposers

### Overview

Students become “experts” and make a creative presentation about the different ecological roles of producers, consumers, and decomposers at local and global scales

### Key Question

How do different organisms obtain energy they need to survive, grow, and reproduce?

### Objectives

Students will **investigate** how different organisms obtain energy.  
Students will **identify** producers, consumers, and decomposers.

Grade: 6-8

Time 45 minutes

Location Classroom

### Materials

- Internet Access
- Science textbook, encyclopedias, and other print resources.
- Worksheet: “Food Web Roles: Expert Groups Worksheet” (attached)

### Culminating Activity

Students will work in groups to create presentations about different ecological roles: producers, consumers, decomposers.

### Directions

1. **Engage prior knowledge of ecological roles.**
  - Quickwrite: Ask students to answer the question: What did I eat for lunch today?
  - Then, project, hold up images, or draw three organisms: one plant, one animal, and one fungus that can be found in their community.
  - Students should then answer the same question for these three organisms. Ask a few students to share their responses. Each of these organisms obtains **energy** in a different way, which we will explore next.
2. **Divide students in groups and assign terms to each group.**

Break students into small groups of 3-4 individuals and assign each one of the following groups to research: primary producer, consumer, decomposer, herbivore, omnivore, carnivore. Explain that they will do an “Each-one-teach-one” with each of these terms.

3. **Have each research one ecological role.**

Have the groups spend 15 minutes using online and print resources to gather information about the ecological role. Use the following questions as guidance:

- What does your word mean? What is your ecological role?
- How does your group obtain energy, and does it provide energy for anything else?
- What are some examples of organisms that fit into this group from around the world?
- What are some examples of organisms that fit into this group from your local ecosystems?

4. **Have students prepare a short skit, poem, or song.**

Give each group five additional minutes to prepare and song, skit, or other short performance to teach the rest of the class about their ecological role, making sure to give information about each of the above questions.

5. **Have groups fill out the handout with information for each role.**

Give each student the Food Web Roles: Expert Groups Worksheet. Students will have 3 minutes to present their findings to the group in a creative way—through a skit, song, or other presentation. Have other students fill out a graphic organizer as each group presents. After each presentation, review with students the ecological role and examples of this in their local communities.

6. **Discuss the different ecological roles.**

Have a whole class discussion about the different roles and the examples they gave. Have students compare the local examples to the global examples for each. Ask: **Which did they find more difficult to research, local or global?** Explain that students will use this information for the next activity, about food web systems.

## Extensions

- Have a “Producer, Consumer, Decomposer Scavenger Hunt.” Bring students outside to the schoolyard, garden, or your school’s designated exploration area. In new small groups, students have students look for evidence of producers, consumers, and decomposers and draw the organisms or signs of the organism on their worksheet.

## Next Generation Science Standards

### Performance Expectations

MS-LS1-6. Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

MS-LS1-7. Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.

MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

### Science and Engineering Practices

Name \_\_\_\_\_ Date \_\_\_\_\_

### Food Web Roles: Expert Groups Worksheet

Directions: Use the following chart to organize information about the different ecological roles.

<b>Ecological Role</b>	<b>Definition</b>	<b>Examples around the world</b>	<b>Examples in the local area</b>
Producer			
Consumer			
Decomposer			
Herbivore			
Omnivore			
Carnivore			



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