



Subject/Target Grade

Science
Upper Elementary & Middle School (4-6)

Duration

30-45 minutes – Classroom and schoolyard setting

Materials

per small group:

- clipboard
- pencil
- magnifying glass (optional)
- *Energy Flow Scavenger Hunt* (student activity)

Michigan Grade Level Content Expectations

- Make purposeful observation of the natural world using the appropriate senses. **S.IP.04.11**
- Identify organisms as part of a food chain or food web. **L.EC.04.11**
- Classify producers, consumers, and decomposers based on their source of food (the source of energy and building materials). **L.OL.06.51**

Energy Flow Scavenger Hunt

Activity Overview

Students take a short field trip into the schoolyard for a scavenger hunt to reinforce understanding of terms and concepts (*producer, consumer, decomposer, food chain, predator/prey, photosynthesis*) used in Lesson 2.

Objectives

Students will be able to:

1. Find examples of terms and concepts (*producer, consumer, decomposer, food chain, predator/prey, photosynthesis, scavenger, herbivore, omnivore, and carnivore*) related to energy flow in the schoolyard.

Advance Preparation

Survey the area of schoolyard to be used for the *Energy Flow Scavenger Hunt*. Determine boundaries and make sure that the area is free of hazards.

Safety Note: Before taking students outdoors, read the *10 Tips for Taking Students Outdoors* information located on page 3 in the Information section of this notebook.

Procedure



1. Review terms and introduce the activity.

What examples of producers, consumers, and decomposers can we find in the schoolyard?

What examples of food chains might we find?

Give each group of two to four students an *Energy Flow Scavenger Hunt* student activity, clipboard, and magnifying glass (optional).

Explain to students that they will have 15-20 minutes in the schoolyard to find evidence of each of the nine items listed on the sheet and illustrate two possible food chains. Review the vocabulary used in the *Energy Flow Scavenger Hunt* handout. Students should draw or describe each of the nine items and describe where they found them. As much as possible, students should only record what they actually SEE during their observations.

2. Take students outdoors.

Make sure that students are aware of teacher expectations for student behavior. Monitor student behavior and progress as they complete the activity. It may be useful to keep students accountable for their time by occasionally reminding them of how much time is left.

Examples of what students might identify for each of the *Scavenger Hunt* requirements:

Solar Energy – shadow, plant growth

Producer – any plant

Photosynthesis – any green plant

Herbivore – grasshopper, caterpillar, butterfly, rabbit, chipmunk, or signs of an herbivore (chew marks, scat, tracks)

Omnivore – robin, black-capped chickadee, human, signs of an omnivore (chew marks, scat, or tracks)

Carnivore – dragonfly, housecat, frog, spider, or signs of a carnivore (chew marks, scat, or tracks)

Decomposer – fungus or mushroom, mold, or worm

Scavenger – beetle, isopod (sow bug)

Predator – Prey Relationship – spider – fly, mosquito – human

Food chain – dead leaf (producer) → worm (decomposer) → bird (consumer)

3. Tying it all together.

Discuss findings and examples from the *Energy Flow Scavenger Hunt*. *Which examples were hardest/easiest to find? What were some of the more interesting or surprising pieces of evidence found? What were the different examples of possible foodchains?*

Assessment Options

1. Evaluate students’ understanding by reviewing their Scavenger Hunt forms to be sure that an appropriate example is given for each box.
2. Consider having each group of students “act out” one of their food chains and have the rest of the class guess/describe the food chain. Students should include at least one producer, consumer, and decomposer. For example, a group of three students might act out the following foodchain:
3. Have students (individually or in groups) create a word web or concept map using the terms from the scavenger hunt.

decomposing leaf → worm → robin

Extensions

In the classroom, have students cut apart the nine squares on their *Energy Flow Scavenger Hunt* sheet and then group similar squares on a bulletin board display, so that students may visualize multiple examples of each concept. (For example, group all of the “producer” cards together in one place and the “photosynthesis” cards in another place.)

