



science



art

An Ecosystem Escapade



Objective

To learn how animals and plants depend on each other in ecosystems.



Activity Description

Students will role-play elements of a food web to illustrate the connections in ecosystems.



Materials Needed

- Paper or cardboard
- Crayons or markers
- Scissors and string
- Hole-punch



Subjects Covered

Food chain
Food web
Ecosystem



Duration

1 hour



Skills Used

Communications
Motor skills



Activity

Step 1: If possible, take the students outside into a natural environment, such as woods (otherwise, ask them to use their imaginations and conduct the lesson indoors). Explain what an ecosystem is and what types of ecosystems are in your area. Ask them to identify different animals and plants that they see when they go outside. Discuss in a group what all animals and plants have in common (i.e., that they need to eat). Explain how some animals eat plants, some plants eat animals (e.g., a Venus Fly Trap), and some animals eat other animals. Ask the students what they eat.

Step 2: Explain that animals and plants rely on each other for food and for survival. All of the plants and animals working together, eating each other and being eaten, is part of nature and can be

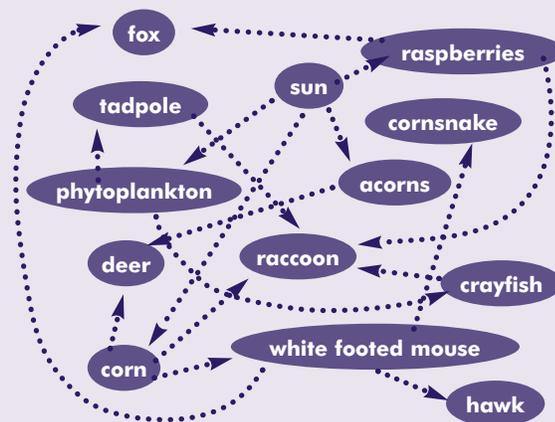
Sample Food Chain:

(in an Eastern U.S. deciduous wooded ecosystem)



Sample Food Web:

(in an Eastern deciduous wooded ecosystem)



Arrows indicate the direction that energy is transferred.

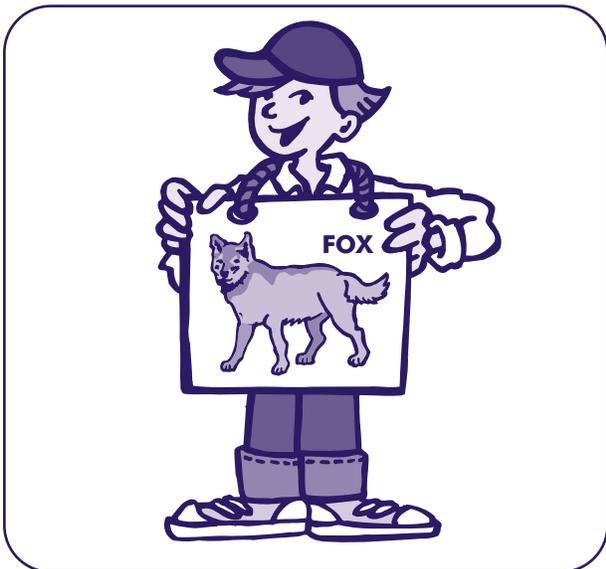
described as “food chains” or “food webs.” Show the students an example on the board (see sidebar for examples of food chains and food webs).

Step 3: Based on the animals and plants that are named by the students, create a food web on the board and have students help you decide which animals and plants eat each other.

Step 4: Have each student pick one animal or plant in the ecosystem described on the board. Instruct each student to draw a picture on a piece of paper or cardboard of their animal or plant and write its name near the picture.



Step 5: Using a hole-punch and string, help students create a placard to identify them as a particular animal or plant.



Step 6: Facilitate an exercise with the students in which they find the animal or plant that they eat and link hands with that person. If the food web is created properly, many people should be holding hands.



Assessment

1. As Step 6 is being conducted, ask students to remember what eats what. If there is more than one option, acknowledge students when they say a correct answer, even if no one in the class is role-playing that particular plant or animal.
2. Ask students why animals eat other animals or plants.
3. Ask students what would happen to the plants and animals in the food web if one plant or animal disappeared. Explore with students reasons why an animal or plant would disappear.



Enrichment

1. Create illustrations and placards exemplifying a chain of foods that the students eat. Then link hands to create one or more chains (for example, people eat hamburger, which is made from cows, which eat grass).
2. Teach the students the words to “This Land Is Your Land” and sing it as a class. Discuss some of the lyrics that describe particular ecosystems (e.g., redwood forests).
3. Tell students the different types of ecosystems that exist in your geographic location, such as streams, ponds, forests, deserts, and meadows. Have each student pick one and draw a picture of it, including animals and plants that live in it. If possible, have students collect items in nature, such as leaves, acorns, bones, bark, to include in their artwork.