

Lesson Title: What is a Food Web? Investigate a Square Yard

Objective:

To illustrate the interdependence of plants and animals in a hands -on ecosystem.

Background:

- An ecosystem is a collection of living and nonliving environments, where plants and animals including humans depend on each other.
- Food chains are the movement of energy through levels of organisms.
- Food webs are interacting food chains in an ecological community.
- A niche is an organism's role in their environment. This is a role that each living thing plays in a habitat.
- Predators are organisms that live by preying on different organisms.
- Prey is an animal hunted or caught for food.
- Producers produce their own food. Producers are green plants. All food chains begin with a plant.
- An organism is any living thing, either vegetable or animal.
- Consumers cannot make their own food.

Grade level: intermediate Grades 3-5

Time: 1-2 Weeks

Materials:

To make observation kits use:

- A meter stick
- Magnifying glass
- 4 Popsicle sticks
- String
- A probe.
- Journal
- Pencil

Procedure:

1. Organize the class in working groups of 4 to explore the book, One Small Square Backyard by Donald Silver. ISBN # 0-7167-6510-1
2. Preset children to observe the plants and animals in one square yard. Discuss niches.
3. Bring observation kit to the designated outside area.
4. The children will measure and mark their group's square yard. Spend 5 minutes quietly observing and writing observations in their journals.
5. Back in the classroom, the group compiles on sticky notes their observations. Then contribute these observations to the large "Ecosquare"
6. Repeat the observation and continue writing observations in their journal three more times during the next few weeks.

Assessment:

1. Can the children visualize a food chain and food web on a large Ecosquare? What population did you find? In what way could this population affect one another
2. Can children identify predators and prey?
3. Can children differentiate between the producers and consumers? If all the plants in this ecosystem die what would happen to the consumers?
4. Write about your 1 square yard.

Extension:

1. Observe through a lens the food web of pond water.
2. Write a poem or cinquain on the sounds heard while observing your "one square yard".
3. Create an almanac on the four seasons to show change over time, in your "one square yard".