

Food Chains

Objective: To understand the connections within a food chain, as well as how producers and consumers interact for energy flow through an ecosystem.

Materials:

- Scissors
- Yarn
- Twigs or coat hangers
- Construction paper and crayons
- Other materials, such as grass, nuts, flowers, and animal pictures to be glued to the food web
- Pre-made index cards with organisms in a food chain written on back
- Hat, bowl or other object to mix and select “organisms” from

Discuss; 15 minutes

Teach students what a food chain is and important terms that are valuable to understanding food webs.

- Food chain: describes the feeding relationships between species within an ecosystem
- Biotic: living parts of the environment
- Abiotic: non-living parts of the environment

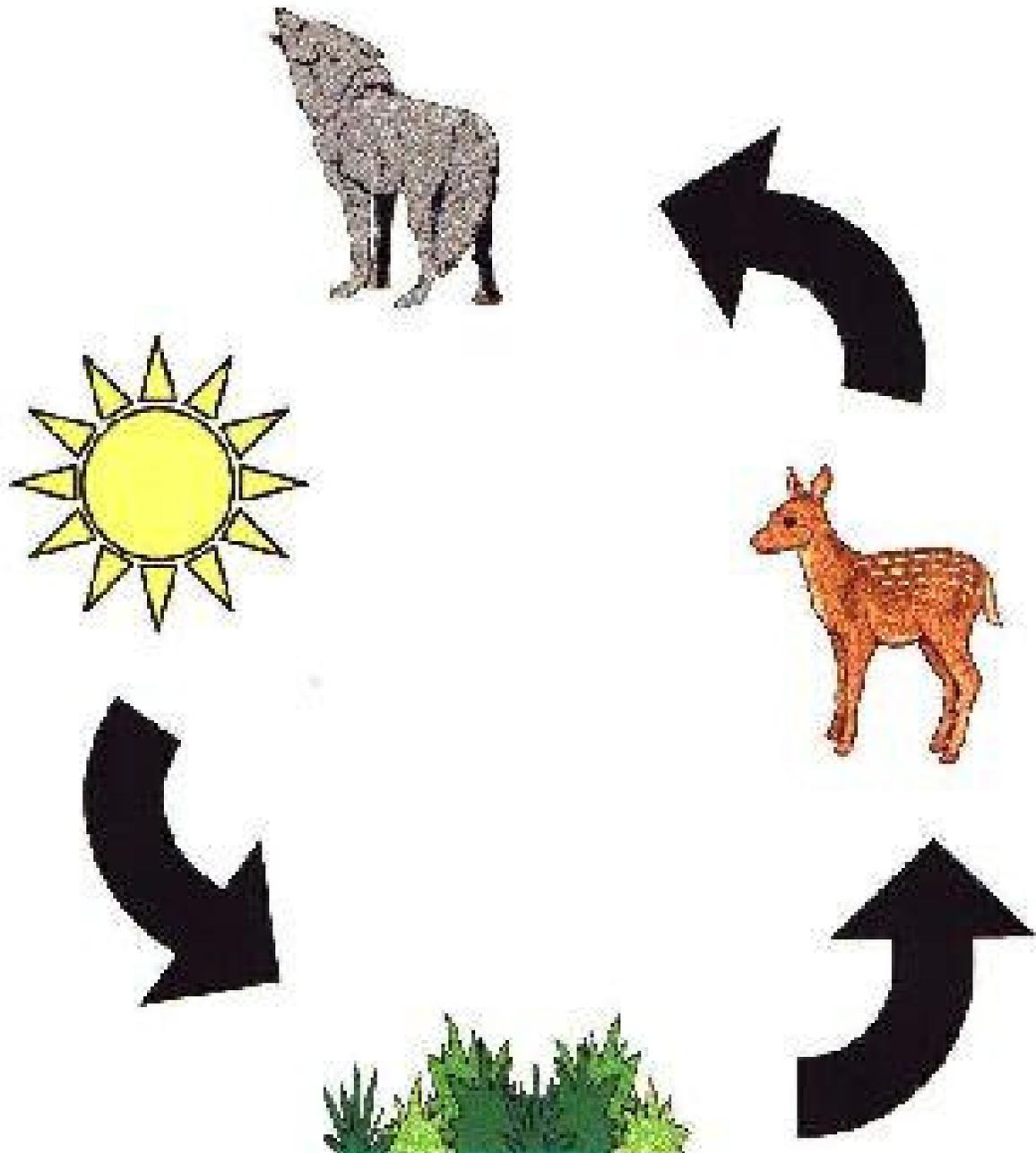
Have students give examples of biotic and abiotic factors in the environment.

- Producers or autotrophs: organisms that make their own food, such as green plants.
- Consumers or heterotrophs: organisms that feed on the producers (plants) and other organisms as well, do NOT make their own food.

Discuss kinds of consumers.

- Herbivores: feed directly on plants
 - Ex. horses, cows, deer
- Carnivores: feed on other organisms
 - Ex. lions, wolves, cougars
- Omnivores: feed on both plants and animals
 - Ex. humans, bears, pigs, raccoons
- Scavengers: feed on dead animals
 - Ex. beetles, vultures, flies, crows

- Decomposers: break down and recycle organic matter
 - Ex. bacteria and fungi
- (10 minutes) Show or draw a sample food web and explain.





Snake Eats Frog



Frog Eats Grasshopper



Fill in the Blanks; 5 minutes

Have students consider their own backyard to construct their own food web by filling in the following:

- The _____ eats the _____ and the _____ eats the _____, and so on...
- Other environments can be illustrated, such as marine, forest, desert, and artic.

Construct a Food Chain; 15 minutes

Using given materials, students can construct a food chain by attaching pictures, drawings, or other materials with yarn to a twig or coat hanger. Producers would be at the top, near the twig or coat hanger, and consumers would fall below, to demonstrate the way organisms are connected

Organism Game; 15 minutes

To tie it all together, have students select an organism out of a hat or bowl from pre-made cards with organisms written on the back. Using a ball of yarn, have students connect their organism to other organisms in the “ecosystem” by throwing the ball to other students and holding on to their section of yarn. This creates a food “web” made from yarn, connecting all students or “organisms.”

Possible organisms to use: deer, worm, raccoon, rabbit, snake, grass, fish, red robin, clover, salamander, pelican, etc.