

My Colorful Food Chain

Standards of Learning

Science 3.1, 3.4, 3.5, 3.10

English 3.1

Objective

Students will:

- Investigate and understand relationships and organisms in food chains (predator/prey; herbivore, carnivore, omnivore)
- Explain the interdependency of plants and animals

Materials

- Farm scene on a poster
- Different organisms (laminated)
- Index cards (one for each student)
- Pencil
- Poster tack

Background Knowledge

This lesson reviews the terms necessary for students to understand food chains and relationships among living things. Students will construct their own “I Am” poem and food chain, given specific organisms to include that relate to Virginia agriculture.

A producer is an organism that makes its own food from sunlight, air, and water. An example is a green plant. A consumer is an animal that eats other living organisms, plant or animal, because they cannot make their own food. Examples are cows, humans, and snakes. There are three different types of consumers. An herbivore is an organism that eats only plants. Examples are geese, butterflies, and goats. A carnivore is an organism that eats only meat. Examples include hawks, snakes, and owls. An omnivore is an organism that eats both plants and animals. Examples include humans, opossums, and foxes. A decomposer is an organism that breaks down decayed plants and animals into smaller pieces that can be used again by living things. Examples are mushrooms and other types of fungi. A predator is an animal that can hunt other animals to get its food. Examples include hawks, owls, and foxes. A prey is an animal that can be hunted by another animal for food. Examples include chickens, mice, and groundhogs.

Every living thing needs energy in order to live. Every time animals do something they use energy to do so. Animals get energy from the food they eat, and all living things get energy from food. Plants use sunlight, water and nutrients to get energy in a process called photosynthesis. Energy is necessary for living beings to grow. A food chain shows how each living thing gets food, and how nutrients and energy are passed from creature to creature. Food chains begin with plant-life, and end with animal-life. Some animals eat plants, some animals eat other animals.

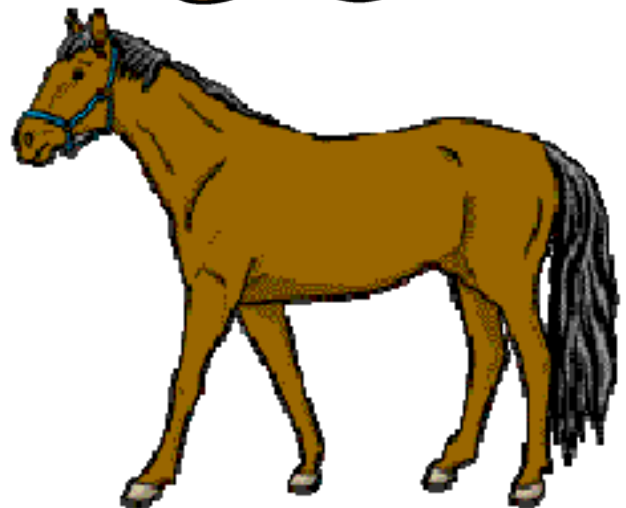
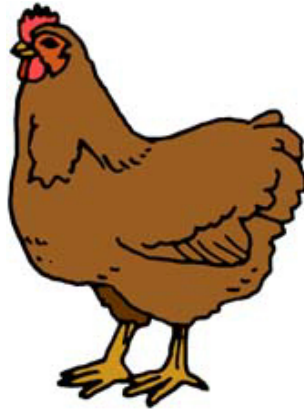
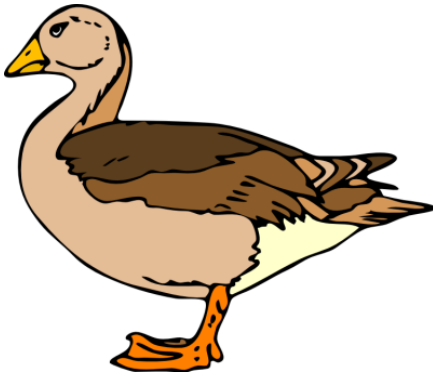
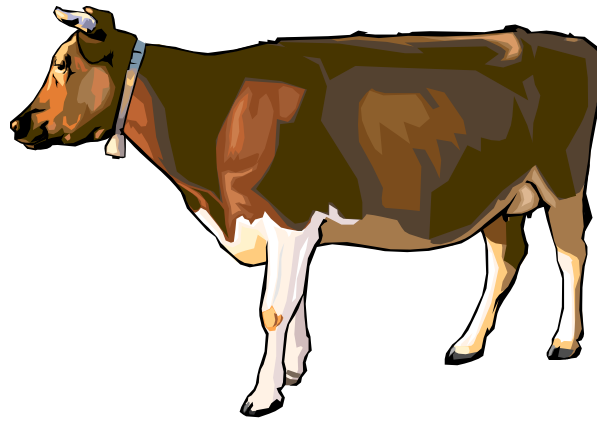
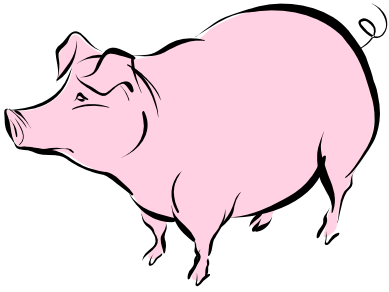


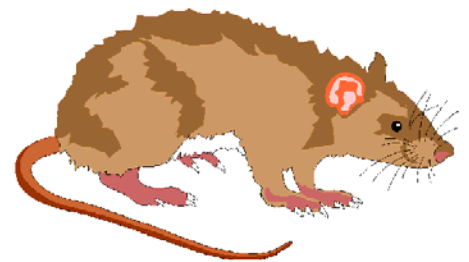
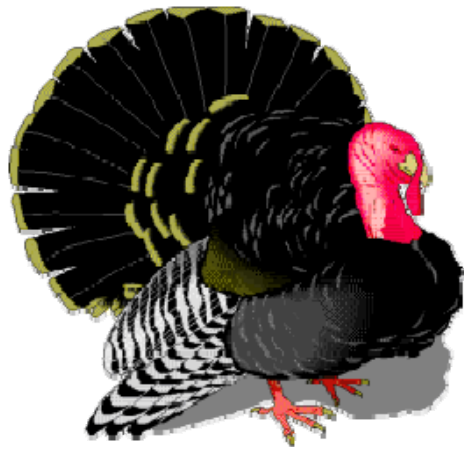
Before beginning the lesson get a large piece poster board and create a farm scene that will depict the different habitats and food chains organisms may fall in. You will want to include sky, pastures, crops, barn, and ponds. You can then cut out the pictures of organisms at the end of this lesson and laminate them so the students can use them during the lesson. You may want to laminate the poster so you can use it over and over, as well. This landscape should be representative of Virginia agriculture. The students will place the picture of their organism on the farm based on its characteristics.

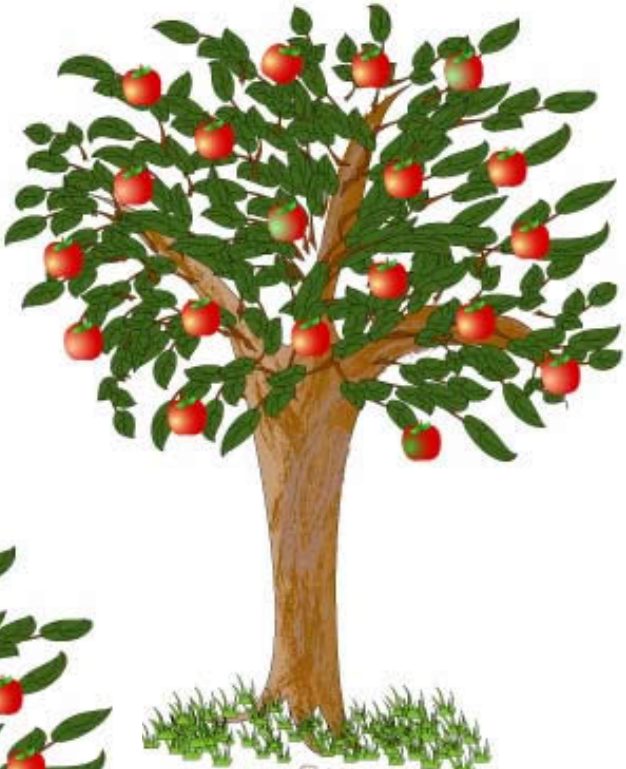
Procedure

1. Ask the students the following questions:
 - a. What is the term for an organism that makes its own food from sunlight, air, and water? Give an example.
 - b. What is the term for an organism that eats other living organisms to obtain food? Give an example.
 - c. What is the term for an organism that breaks down decayed plants and animals into smaller pieces that can be reused by other living things? Give an example.
 - d. What is the difference between an herbivore, a carnivore, and an omnivore?
 - e. What are humans classified as?
 - f. What is the relationship between a predator and a prey?
 - g. What is a food chain and how does it relate to a food web?
2. Hand each student an organism that you have cut out and laminated.
3. Hand each student an index card.
4. Then tell the students to use the index card to write an “I Am” poem about the organism that they have been given. Their poem can include the terms associated with food chains, such as producer, consumer, decomposer, herbivore, carnivore, omnivore, predator, and prey, where they are applicable. Remind students that animals can be classified by more than one of these terms. For example, a rabbit can be a consumer, herbivore, and prey. They may also describe what they eat, where they live, what eats them, and what they look like.
5. After the students have completed their poems, ask them to take turns coming up front to share their poem with the class.
6. After they have shared, attach one piece of poster tack to the back of each student’s organism.
7. Have each student come to the farm poster at the front of the class to place their organism in the correct habitat and in the correct order of the food chain. Each student should take into account where the other organisms are placed in order to create a precise food chain.
8. After all the students have discussed and attached their organism pictures, ask each of them to take a look at what they have created and ask them why they placed their organisms where they did.
9. Ask the following questions to review:
 - i. What is a food chain?
 - ii. How do an organism’s needs and characteristics affect a food chain?
 - iii. If you changed one organism in the food chain, would the other organisms have to change also?
 - iv. Is the habitat your organism and the organisms of your food chain the same as the area in which you live?
 - v. If not, how would this affect your food chain?









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