

## What's for Dinner?

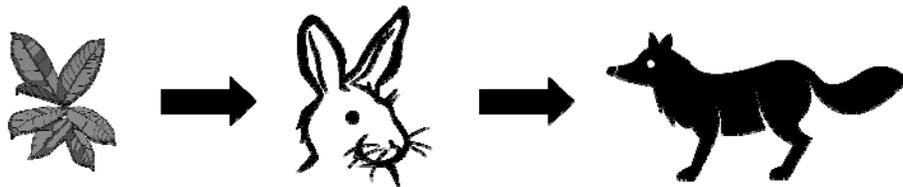
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<b>Strand</b>	Living Systems
<b>Topic</b>	Herbivores, carnivores, and omnivores
<b>Primary SOL</b>	3.5 The student will investigate and understand relationships among organisms in aquatic and terrestrial food chains. Key concepts include b) herbivore, carnivore, omnivore.
<b>Related SOL</b>	3.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which c) objects with similar characteristics or properties are classified into at least two sets and two subsets.

### Background Information

It is suggested that you teach 3.5a first.

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 which gets energy from the sun, and end with animal life. Some animals eat plants and some animals eat other animals. A simple food chain could start with plants, which are eaten by rabbits. Then the rabbits are eaten by foxes. Each link in this chain is food for the next link.



All animals are a carnivore, an herbivore, or an omnivore.

Carnivores eat only meat. They are generally good hunters, move quickly, and have strong, sharp teeth for tearing.

Herbivores eat only plants and usually have flatter teeth for chewing plants.

Omnivores eat both plants and meat, and have some traits from both plant eaters and meat eaters. Humans are omnivores.

### Materials

- Small sticky notes or paper squares – enough for five to six per student
- Tape (if paper squares are used)
- Markers – one per group of two to three students
- 11 x 17 inch paper — 1 sheet per student
- Crayons
- Poster board or large construction paper

- Bulletin board paper
- Markers and other art supplies
- Science journal

## Vocabulary

*herbivore, carnivore, omnivore*

## Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

### Introduction

1. Review food chains and producers, consumers, and decomposers. Tell the students that today we are going to be exploring the various kinds of consumers. Remind students that they are consumers.

### Procedure

1. Divide the students into groups of two to three students. Give each group some sticky notes or squares of paper (enough for each student to have five to six each). Give each group a marker.
2. Have one person in the group be the recorder. Each person in the group needs to give the recorder all the items they had for dinner the previous night. The recorder will write each item on a separate sticky note or paper square.
3. Once the group has completed recording all the items, have each group look at all the items they had for dinner the night before and sort them. (Do not tell them how to sort them initially other than to tell them you would like for them to come up with at least three different categories in which to sort their items.)
4. Once groups are through sorting their foods items, have each group share how they sorted theirs. (Accept the various ways they may have sorted.)
5. Write the following words on the board or on a chart: plants, animals, combination/both. Discuss what kinds of items could go in each of the categories.
6. Have the student teams re-sort their items by these three categories. Assist the groups with those items which they may have difficulty categorizing into the three categories.
7. Have each team bring their sticky notes or paper squares up and put them in the correct categories on the board.
8. Build a graph on the board using the sticky notes or paper squares. Discuss what the graph shows us about what the class had for dinner the previous night. (Some possible things they might note would be that most of the students had a meat or about half the class had a plant with their dinner, etc.)
9. Ask, “How is this sorting activity related to consumers?” Encourage students to think about the fact that consumers cannot produce their own food to get energy. Consumers must eat producers, other animals that eat producers, or both. Remind the students again that humans are consumers.
10. Share that animals can be grouped three ways, as herbivores, carnivores, or omnivores.
11. Explain the definitions of each. Discuss the root words for each to help students remember the words:

- a. Herbivore – Latin origin, from herba "an herb" + vorare "devour, swallow"
  - b. Carnivore - Latin origin, from *carne*, 'flesh' and *vorare*, 'devour'.
  - c. Omnivore - Omni- is derived from the Latin word, omnis which means: all, completely and *vorare*, 'devour'. Therefore, an omnivore is an animal or human that eats every kind of food.
12. Have the students write the words in their student journals and write a definition in their own words for each.
  13. Read a book or fairy tale about an animal that eats something different. Have the students decide if the animal is a herbivore, a carnivore or an omnivore and why they have drawn that conclusion.
  14. Give each student a piece of 11 x 17 inch paper and have them fold it to form six equal-sized boxes. In each box, have the students draw an animal that they are interested in knowing more about. Have the students label each box with the animal's name. Suggest the following, as needed:

snowshoe hare	lion	chimpanzee
sheep	wolf	badger
squirrel	cougar	bear
mouse	wolf	pig
rabbit	falcon	raccoon
deer	robin	chicken
insect	cheetah	fly
fish	black bear	beetle
rodent	hummingbird	wasp

15. Divide the class into groups of four students.
16. Have each group make a chart on poster board with the headings "Herbivore," "Carnivore," and "Omnivore."
17. Have each member of the group cut their six boxes apart and place their cards face down in the middle of the table, making a deck of cards.
18. Have the group members take turns flipping a card, deciding where it fits on the chart based on what it eats, and gluing it in the proper column. Students should use the Internet and books for reference.
19. Hang all the posters around the room, and have the students look at each category. Have them try to think how the animals in each category are alike.

20. Animals in each category have other shared traits that are indicative of their eating habits. For example, carnivores are good hunters, move quickly, and have strong limbs for grabbing and holding; they also have strong, sharp teeth for tearing. Herbivores usually have flatter teeth for chewing plants, and they don't usually move as fast as carnivores because they don't have to hunt. Omnivores have some traits from both plant eaters and meat eaters.

### **Assessment**

- **Questions**
  - How are producers, consumers, decomposers, herbivores, carnivores, and omnivores related?
  - Could carnivores survive without plants? Why or why not?
- **Journal/writing prompts**
  - If all of the herbivores were removed from the world, how would the world food web change?
  - What can you do to make sure that food chains are not disrupted?
- **Other**
  - Have students choose two herbivores, a carnivore, and an omnivore from the chart and create a food chain. Students should remember to add a producer to the food chain.

### **Extensions and Connections (for all students)**

- Using the food chains from the prior lesson (3.5a), classify each animal in the food chain as a herbivore, a carnivore or an omnivore. Note that all animals are consumers. How are these consumers related to the producer at the beginning and the decomposer at the end of the food chain?

### **Strategies for Differentiation**

- Illustrate a herbivore by making the H a garden, the Carnivore by making the letter C an open mouth with lots of teeth, and the Omnivore as a child's face with an open mouth. The students can draw or place a picture of a type of meat and a type of vegetable in the child's open mouth.