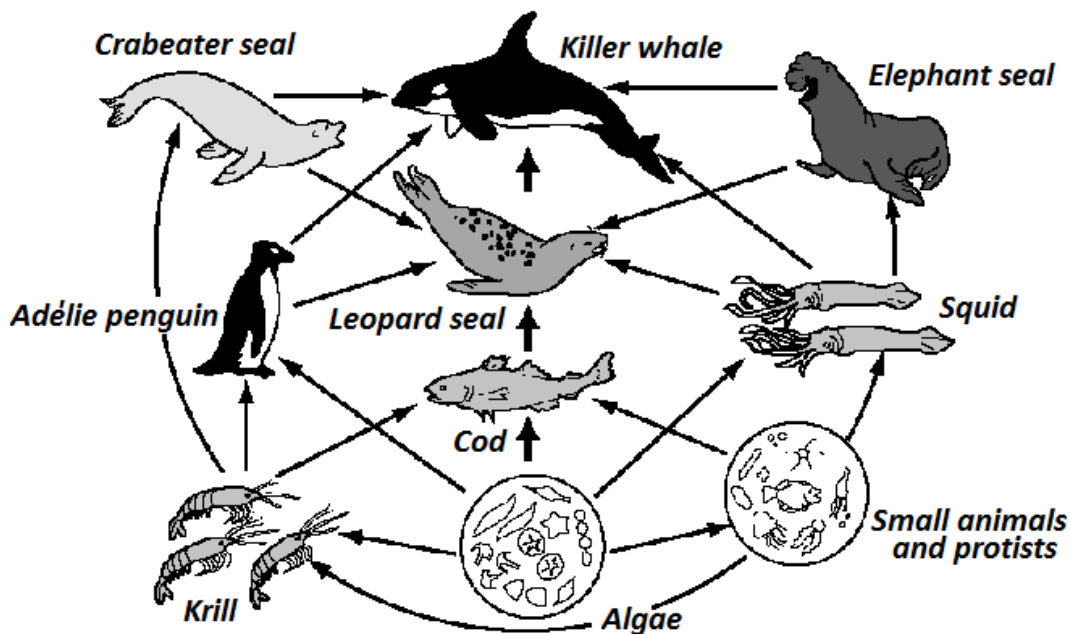


Build a Food Web Activity

As you have learned, a food web is a depiction of how energy moves through a community of organisms. Food chains show only a single set of energy transfers, ignoring that many organisms obtain energy from many different sources, and in turn may provide energy to many different organisms. You will be building your own food web.

Procedure:

1. Obtain a 50cm x 50cm piece of construction paper to be used as poster paper.
2. Write the first and last names of each person in your group on the upper-right hand corner of your poster. Include the period number and date.
3. Use scissors to cut out the picture cards on pages 4, 5, and 6 of this handout.
4. Find the Color Key card. Use different colors to color each of the triangles on the card.
5. Paste the Color Key Card on the bottom right corner of the poster paper.
6. Find the sun card and paste it to the upper-left corner of your poster paper.
7. Sort the remaining picture cards into groups according to the following trophic levels: producers, primary consumers, secondary consumers, and tertiary consumers. For example, plants are producers, snails are primary consumers, crayfish are secondary consumers, and turtles are tertiary consumers.
8. Color the triangles in the upper right-hand corner of each picture card according to the type of trophic level that each organism falls under.
9. Decide on 15 picture cards in which to construct a food web. Your food web must have at least two organisms from each trophic level.
10. Arrange the 12 picture cards on your poster paper and then glue them in place. Use arrows to show that energy is passed from one living organism to another (arrows go from the plant or animal that is eaten to the animal doing the eating).
11. An example of a marine food web is shown below.



Name _____

Once you have completed the food web, complete the tasks below.

Tasks / Questions:

1. Using your food web, classify the different types of consumers in your food web as one of the following:
 - Carnivores:
 - Herbivores:
 - Scavengers:
 - Omnivores:
 - Decomposers:
 - Detritovores:

Build a Food Web Activity

Name _____

Period _____ Date _____ Seat _____

2. Draw in three different food chains based on the feeding relationships on your food web.

	Food Chain #1	Food Chain #2	Food Chain #3
Producer			
Primary Consumer	↓	↓	↓
Secondary Consumer	↓	↓	↓
Tertiary Consumer	↓	↓	↓

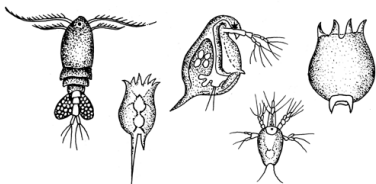
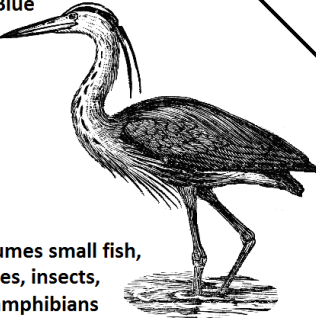

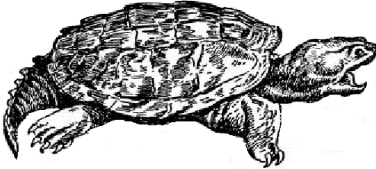
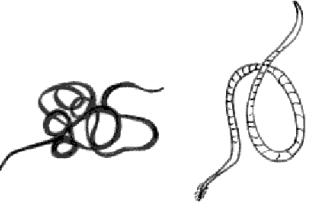
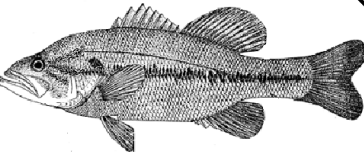
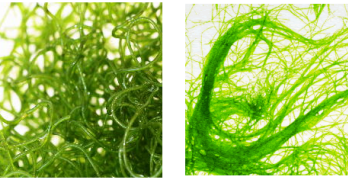
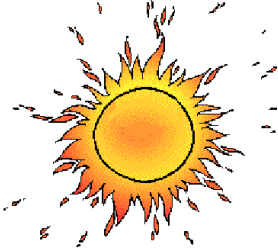
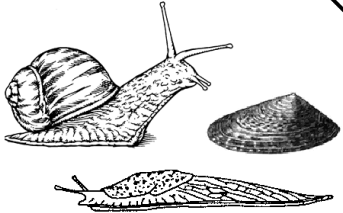
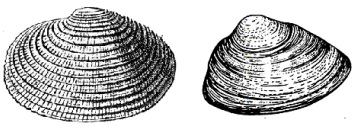

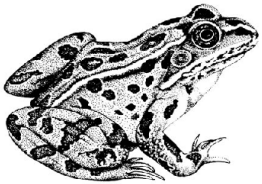
3. What would happen to your food web if aquatic plants died out because of pollution?

4. What would happen to your food web if the population of a tertiary consumer was to double?

5. Asian carp consume zooplankton, which many fishes typically feed on in their juvenile stages, and have no known predators (in Asia). How would the introduction of Asian carp affect your food web?

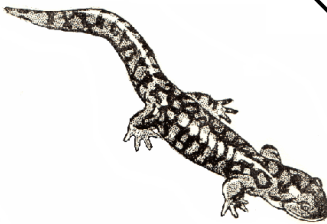
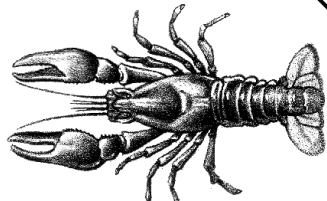

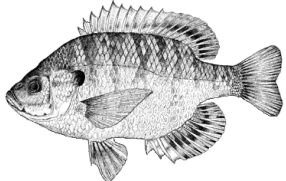
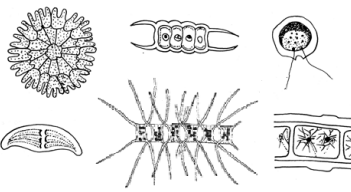
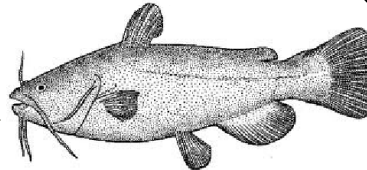
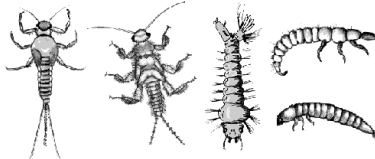
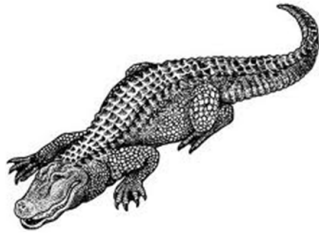
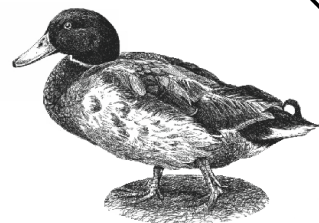
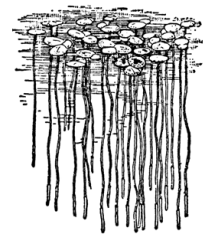
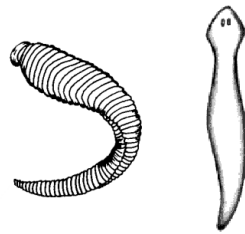




Build a Food Web Activity

PICTURE CARDS

<p>Zooplankton (Microscopic animals)</p>  <p>Consumes phytoplankton, detritus, and other zooplankton.</p>	<p>Great Blue Heron</p>  <p>Consumes small fish, reptiles, insects, and amphibians</p>	<p>Detritus (Nonliving organic material)</p>  <p>The remains of dead organisms, feces, fallen leaves, and wood.</p>
<p>Snapping Turtle</p>  <p>Consumes invertebrates, fish, reptiles, birds, mammals, and plants</p>	<p>Aquatic worms (Nematodes, tubifex, oligochaetes, & bloodworms)</p>  <p>Consumes detritus and bacteria</p>	<p>Largemouth Bass</p>  <p>Young -- Consumes zooplankton and insects Adult -- Consumes Fish, crayfish, and frogs</p>
<p>Filamentous Algae</p>  <p>Converts energy from sunlight into food energy</p>	<p>Sun</p>  <p>Ultimate source of energy for life</p>	<p>Gastropods (Snails and slugs)</p>  <p>Consumes phytoplankton, detritus, and aquatic plants</p>
<p>Bivalves (Clams and mussels)</p>  <p>Consumes phytoplankton, bacteria, and detritus</p>	<p>Aquatic plants</p>  <p>Converts energy from sunlight into food energy</p>	<p>Pond Frog</p>  <p>Young – Consumes algae and detritus Adult – Consumes Insects, spiders, small fish, and worms</p>

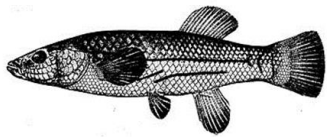
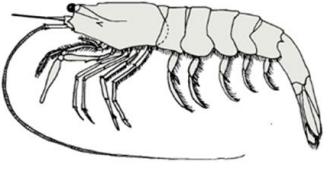


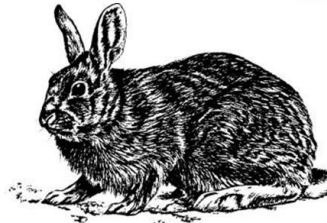
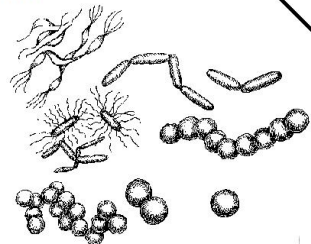

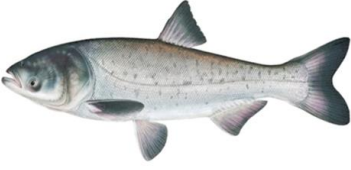



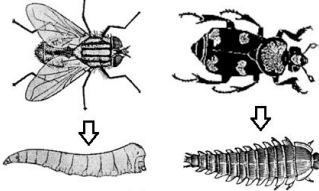
Build a Food Web Activity

PICTURE CARDS

<p>Newts and Salamanders</p>  <p>Consumes worms, snails, tadpoles, insects, and other salamanders</p>	<p>Crayfish (crawdads)</p>  <p>Young -- Consumes zooplankton Adult -- Consumes fish, plants, worms, insects, snails, & plankton.</p>	<p>Raccoon</p>  <p>Consumes plants, worms, gastropods, fish, bivalves, amphibians, & crayfish</p>
<p>Bluegill</p>  <p>Young -- Consumes zooplankton Adult -- Consumes insect larvae, crayfish, leeches, snails, small fish</p>	<p>Phytoplankton (Microscopic photosynthetic organisms)</p>  <p>Converts energy from sunlight into food energy</p>	<p>Bullhead (Catfish)</p>  <p>Consumes aquatic plants, algae, insects, worms, fish eggs, and small fish</p>
<p>Aquatic insect larvae (Mayfly, stonefly, mosquito, caddisfly, riffle beetle)</p>  <p>Consumes algae, plankton, and bacteria</p>	<p>Alligator</p>  <p>Consumes mammals, birds, reptiles, fish, and amphibians.</p>	<p>Mallard</p>  <p>Consumes seeds & plants; may also eat insects, mollusks, crustaceans</p>
<p>Duckweed</p>  <p>Converts energy from sunlight into food energy</p>	<p>Aquatic worms (Leeches, planaria)</p>  <p>Consumes insect larvae, snails, and worms</p>	<p>Color Key</p> <ul style="list-style-type: none">  <i>Producers</i>  <i>Primary Consumers</i>  <i>Secondary Consumers</i>  <i>Tertiary Consumers</i>

Build a Food Web Activity

PICTURE CARDS

<p>Flagfish</p>  <p>Consumes algae and phytoplankton</p>	<p>Grass shrimp</p>  <p>Consumes aquatic plants, algae, phytoplankton, detritus</p>	<p>Beaver</p>  <p>Tree bark, twigs, shoots & leaves</p>
<p>Trees, shrubs, & grass</p>  <p>Converts energy from sunlight into food energy</p>	<p>Marsh rabbit</p>  <p>Consumes plants</p>	<p>Bacteria</p>  <p>Decomposes detritus, dead organisms</p>
<p>Dead animals</p>  <p>Are consumed by bacteria, insects, fungi.</p>	<p>Grass Carp</p>  <p>Consumes aquatic plants, algae.</p>	<p>Rotting log</p>  <p>Are consumed by bacteria, insects, fungi.</p>
<p>Vulture</p>  <p>Consumes dead animals.</p>	<p>Toadstool fungus</p>  <p>Decomposes organic matter</p>	<p>Insects and their larvae</p>  <p>Maggots</p> <p>Decomposes dead organisms</p>