

# The Food Connection

## OBJECTIVES

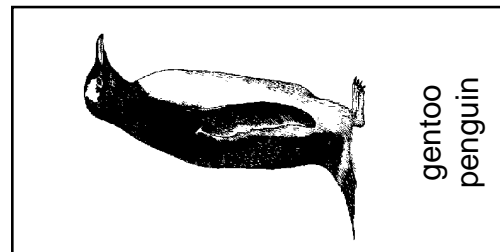
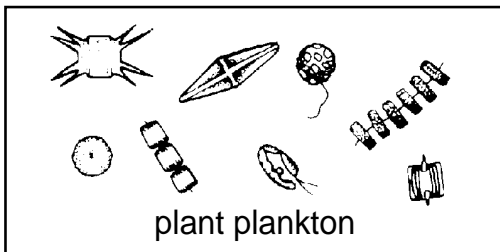
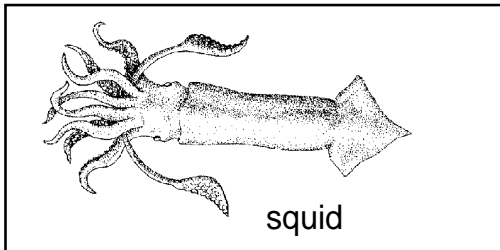
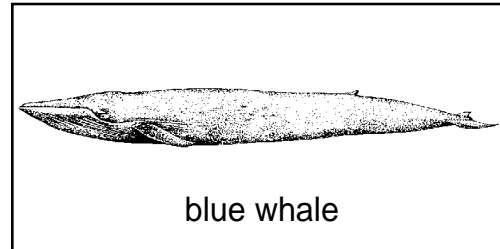
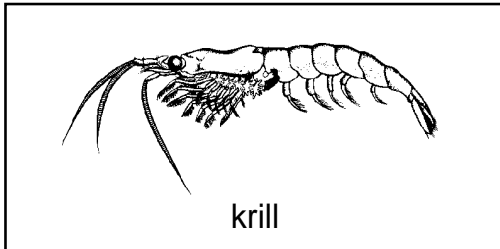
Students make connections among penguins and other antarctic animals.

## BACKGROUND

A food chain is a diagram that shows "who eats whom." A food web is a diagram that shows some of the many interconnected feeding relationships in an ecosystem. Food chains and food webs help us understand relationships in an ecosystem.

## MATERIALS

- classroom bulletin board and tacks
- Copies of cards below. Copy the following quantities, enlarged at 150%.
  - blue whale ..... 1
  - killer whale ..... 1
  - gentoo penguin ..... 1
  - squid ..... 2
  - krill ..... 4
  - plant plankton ..... 8 or more  
*(enough for each student to have a card)*
- large sun illustration or yellow circle
- coloring pencils or crayons
- 3" x 5" index cards
- yarn
- scissors



## ACTION

2. Distribute one card to each student. Students color their illustrations and glue them to index cards.
3. Ask for the student with the killer whale card to come forward. What do killer whales eat? (*Penguins*) Ask for the student with the penguin card to come forward and hold hands with the killer whale. What do penguins eat? (*Krill*) Ask for a student with a krill card to come forward and hold hands with the penguin. What do krill eat? (*Plant plankton*) Ask for a student with a plant plankton card to come forward and hold hands with the krill. Where do plants get energy? (*From the sun*) Attach an illustration of the sun (or a yellow circle) to a classroom bulletin board and have the plant plankton touch the sun. The students have just illustrated a food chain. Students sit down.
4. Now the whole class will work together to illustrate a food web. Ask students with plant plankton cards to bring their cards to the bulletin board. Explain that these are microscopic plants that drift in the sea. Like plants on land, plant plankton gets its energy from the sun. Tack the plant plankton cards to the bulletin board (near the sun). Use yarn to link each plant plankton card to the sun.
5. Next, have students with krill cards bring their cards to the bulletin board. Krill get energy by eating plankton. Tack the krill cards to the bulletin board. Use yarn to link each krill card to two or more plankton cards.
6. Students with squid cards bring their cards to the bulletin board. These squid get energy by eating krill. Tack the squid cards to the bulletin board. Use yarn to link each squid card to two krill cards.
7. Ask the student with the penguin card to bring it to the bulletin board. Gentoo penguins get energy by eating krill and squid. Tack the penguin card to the bulletin board. Use yarn to link it to one krill card and one squid card.
8. Ask the student with the blue whale card to bring it to the bulletin board. Blue whales get energy by eating krill, and it takes a lot of krill to feed a blue whale. Tack the blue whale card to the bulletin board. Use yarn to link it to each krill card.
9. Ask the student with the killer whale card to bring it to the bulletin board. Killer whales get energy by eating fishes, marine mammals, and (in the Southern Hemisphere) penguins. Tack the killer whale card to the bulletin board. Use yarn to link it to the blue whale card and to the penguin card.
10. Ask students to talk about the diagram. Include the following discussion points:
  - The sun is the source of energy for our planet. Only plants can use the sun's light to make energy.
  - Animals must eat plants or other animals to make energy.
  - All the plants and animals in the system are interconnected. One cannot be removed without affecting others.
  - How do people affect a food chain?