



SeaWorld/Busch Gardens Ecology & Conservation

K-3 Classroom Activities

How Degrading

OBJECTIVE

Given examples of trash generated by a family over a 24-hour period, the student will be able to demonstrate how some materials degrade in salt water better than others. They will be able to generate ideas for ways to reduce plastic pollution.

ACTION

1. First, ask students to name all trash produced by their family during a 24-hour period. List on the board the names or draw pictures of as many different kinds of trash as students can name.
2. Next, discuss what happens when trash accidentally reaches the ocean. Use these questions to help prompt discussion:
 - How does trash end up in the ocean?
 - What kinds of trash have you seen in the ocean (or lake, stream, or other body of water)? If the trash is listed or pictured on the board, circle it.
 - What eventually happens to the trash? Where does it go?
 - How can students work together to design an experiment to see what happens to trash that is in salt water?
3. Ask students to bring in samples of newspaper, tin can, glass, and plastic trash (washed and cleaned). Set up the plastic tub with salt water. Submerge the trash in the tub of salt water. Add more salt water when necessary.
4. Once a week (for one month) examine each piece of trash and record changes in its appearance.
 - Which kinds of trash appear to be degrading? Which kinds do not?
 - What other changes do you observe?
6. Discuss the possible impact each type of trash might have on the aquatic environment and aquatic life. Ask your students to think of ways that could help decrease the amount of nonbiodegradable waste.
 - Can students use different products, or products packaged differently?
 - Can students recycle?

DEEPER DEPTHS

Organize a schoolyard clean-up.

Participate in a beach, stream, park, or playground clean-up in your area.

MATERIALS

For the classroom:

- trash items of newspaper, tin can, plastic, and glass
- salt water (concentration 1/2 cup salt to one gallon water)
- a plastic tub large enough to completely submerge trash



When cleaning a beach or schoolyard, wear proper cleaning attire: gloves and close-toed shoes.



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K-3 Classroom Activities

Antarctic Food Chain Song

OBJECTIVE

Students describe an antarctic food chain.

ACTION

1. Make a 200% enlarged photocopy or transparency of the illustrations on page 4.
2. Ask students what they think the penguin might eat. Adelle penguins eat fish and krill.)
3. Show students the krill. Explain that antarctic krill can be about the size of a child's little finger. Ask students what they think a little animal like krill might eat. (Krill eat plankton.)
4. Show the plankton. Explain that these kinds of plankton are microscopic plants that drift in the sea. Like plants on earth, plant plankton gets energy from the sun.
5. Ask students what might eat a penguin. (Killer whales, sharks, various kinds of sea lions, and leopard seals eat penguins.) Show students the illustration of the leopard seal.
6. Can your students name a predator that might eat a leopard seal? (Killer whales might eat leopard seals.)
7. Teach students the song on page 4.

BACKGROUND

Food chains are helpful in understanding the relationships and interconnections of the animals in an ecosystem. In this activity, students explore a simple antarctic food chain that includes plankton, krill, a leopard seal, a penguin, and a killer whale.

A food web includes many food chains that are linked together through various members of the ecosystem. For instance, in addition to the plants and animals in this food chain, a food web might include blue whales, minke whales, various fishes, and other seals.

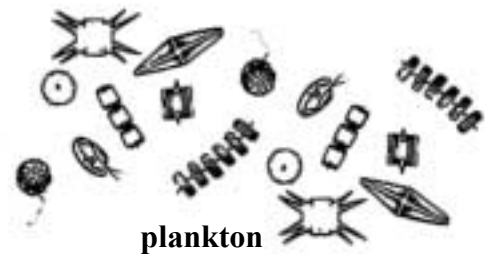
MATERIALS

- illustrations of plankton, krill, leopard seal, penguin, and killer whale on page 4: 200 % enlarged photocopy or transparency
- song on page 4

Antarctic Food Chain Song

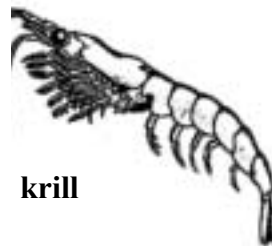
(to the tune of "Itsy Bitsy Spider")

Itsy bitsy plankton,
drifting in the sea.
Along comes the krill,
and eats it easily.



plankton

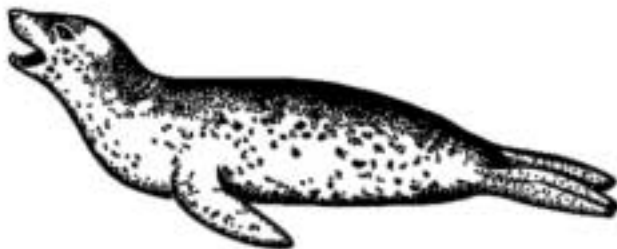
Next come the penguins,
and the leopard seals.
The antarctic killer whale
finishes up the meal!



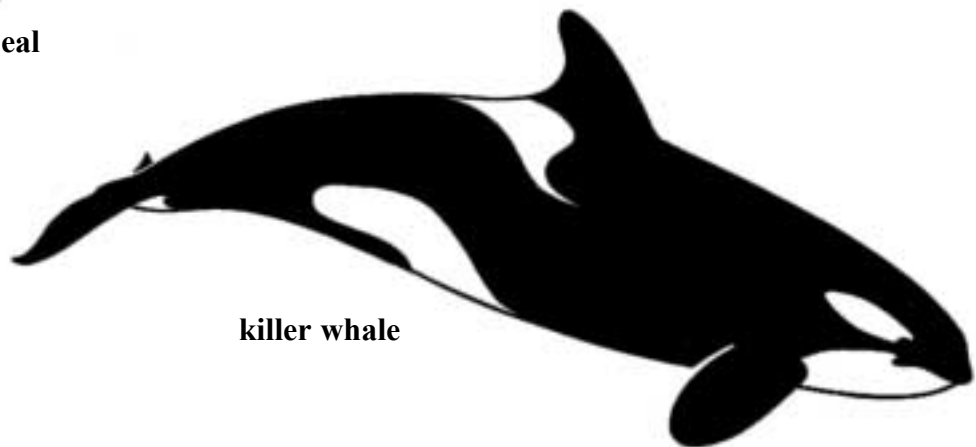
krill



penguin



leopard seal



killer whale