

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.

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

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?

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