



NYSDEC Environmental Education

Where is Away?

For Students in Grades 5 through 8

A 45- minute program designed to introduce the basics of where garbage goes, and how reduction of the waste stream is beneficial. Our focus will be on local issues and personal choices.

Goals

- Students will be able to describe where garbage goes after it is thrown in a garbage can.
- Students will be able to identify items that can be recycled at school and at home.
- Students will identify ways they can personally reduce the amount of garbage they create on a daily basis.
- Students will be able to identify the things that recycling saves: time, energy, money, landfill space, natural resources, and less pollution.

NYS Intermediate Level Science Core Curriculum

Standard 1: *Scientific Inquiry*

Key Idea 1: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process.

Standard 4: *The Living Environment*

Key Idea 7: Human decisions and activities have had a profound impact on the physical and living environment.

Materials

- Examples of recyclable material: paper, glass, plastic and metal
- Laminated hand-held signs representing a type of garbage

Discussion

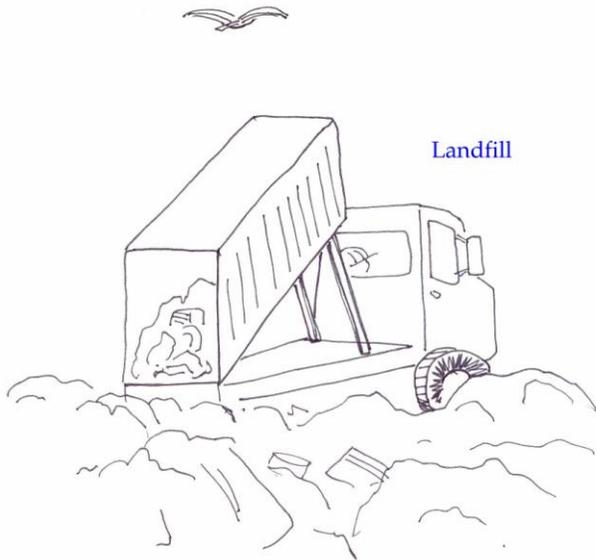
Ask students to define “garbage.”

Challenge students to explain what happens to garbage after it is thrown away.

Follow up with the questions, “Are there any alternatives to throwing everything in a landfill?” “What happens to a landfill when it fills up?” “Where does the garbage go then?”

The following can be turned into an overhead or drawn on the chalkboard.

Where is 'Away'?



The Three 'R's (and a C!)

1. Waste Reduction

Waste reduction is actually defined as not making waste to begin with. We all have choices that we can make everyday that will produce less garbage.

Examples: Bringing a cloth bag to the supermarket instead of using provided plastic bags for groceries.

Refusing a bag at the deli.

2. Reusing

Defined as using the same object over and over again.

Examples: Using a plastic sandwich container instead of a disposable plastic bag.

Drinking out of a glass instead of a paper cup.

3. Recycling

Defined as taking material and turning it into something new.

Examples: Taking old soda bottles and turning them into carpets.

Taking old aluminum cans and remaking them into new aluminum cans.

4. Composting

Turning plant and food waste into soil.

Examples: Lawn clippings and raked leaves chopped up and allowed to decompose.

Vegetable peels and coffee grounds put in a vermiculture (worm) bin to turn into soil.

What can be recycled?

Lead a discussion explaining the wide variety of things that may be recycled and describe to students how to identify recyclable materials. In order to reinforce the concepts, demonstrate with recycled examples.

Paper

What it comes from-

Trees

Recycled paper

Types of paper recycled-

Newspaper

Magazines

Office and writing paper

Corrugated cardboard

What it can be recycled into-

Toilet paper

Paper towels

Office paper

Insulation

Plastic

What it comes from-

Oil

Recycled plastic

Types of plastic recycled-

Numbers 1-7 (1-2 in our area)

What it can be recycled into-

Lumber

Clothing

Office supplies

Toys

Milk crates

Carpeting

Bottles and jars

Glass

What it comes from-

Sand

Soda ash

Limestone

Types of glass recycled-

Clear, brown, blue, green

What it can be recycled into-

Bottles and jars

Aggregate (road surfaces)

Insulation (fiberglass)

Metal

What it comes from-

Mineral ores

Recycled metal

Types of metal recycled-

Aluminum

Steel

Nickel and cadmium (batteries)

What it can be recycled into-

Cans

Cars

Classroom Demonstration / Activities

Engage the students with “The Life of an Aluminum Can” demo. In this demonstration ask students to identify the steps in the creation of a can and contrast an open ended system (throwing the can away) with a closed loop (recycling the can into another can). This demonstration illustrates the amount of resources involved in the creation of the can and how much can be saved by recycling.

Play the “Garbage Game.” In this activity, each student represents a type of garbage. Laminated hand-held signs identify each student. Three students represent the proper places for garbage to go (landfill, recycling, compost). Each student in turn joins the place they belong.

Introduce the “Litter Free Lunch.” In this demonstration illustrate simple choices that students can make that can reduce the amount of trash they create personally. Use examples from a typical lunch that uses non-recyclable choices and one that uses completely reusable or recyclable choices. Encourage students to find a comfortable middle ground in their personal choices. Some examples may include:

Lunch Item: Sandwich

Garbage choice: bring sandwich in plastic bag

Recycle choice: bring sandwich in recyclable aluminum foil

Reuse choice: bring sandwich in Tupperware storage box that is washed and reused

Lunch Item: Juice

Garbage choice: bring juice in small juice box with straw

Reuse choice: bring juice in thermos

Lunch Item: Napkin

Garbage choice: paper napkin

Reuse choice: cloth napkin

Question and Answer / Conclusion

Encourage the students to build upon the concepts that were introduced throughout the program. Ask students what recycling, if any, their family already does at home. What changes do they think they might make to improve recycling and reduce waste at their house?

Reinforce the benefits of reducing waste, reusing items and recycling materials.

- Less energy is used by recycling, compared to creating items from raw materials.
- Fewer natural resources are used when material is recycled.
- When an object is recycled, it does not become litter.
- When an object is recycled, it does not take up space in a landfill.
- For many materials, it costs less to recycle than to create from raw materials.