



Reducing the Amount of Plastic That Goes to a Landfill

Post- Field Trip: Lesson 1

Resource: Closing the Loop, K-3 Module, Unit 2, Lesson 1

Objectives

An important application of the 4Rs concept is to implement a plan to reduce the amount of plastic that goes into the landfill. In this lesson, students will identify products made from plastic, learn how to distinguish different types of plastic by their plastic container code, and identify which types of plastics can be recycled in their community. By applying their knowledge of the 4Rs concept, students will better understand how to conserve natural resources.

Time

30 minutes for lesson preparation; 45 minutes to implement the lesson.

Preparation

1. Ask students to bring to class several rinsed out plastic containers, including soda bottles and/or gallon milk jugs. Make sure that each group of students will have both wide-mouth and narrow-neck **code 1-5** plastics (collect additional containers as needed). Also collect plastic bags with the **code 7** and any polystyrene (styro-foam) with the **code 6**.
2. Make copies of the sorting sheet, "I Can Sort Plastics" for each group of students. *Ideally, the copies will be made on re-used paper.* (See *Note* in Procedure section for alternate use of sorting sheet.)
3. Find out what types of plastics are recycled in your community (see the CVSD Residential Curbside Services Guide). It is a good idea to post a list of recyclable items on the blackboard for students to reference during the activity.

Pre-Activity

- A. Have each student locate in the classroom and/or bring to the floor one or two items made from plastic. Cover these items and ask students to identify additional items around the room that are made from plastic. *Help students identify additional items made from plastic (e.g. markers, countertops, white boards, plastic toys, anything laminated, etc.).* What is left? *Some non-plastic items: windows, the door, bookshelves, and books.*
- B. Discuss with students:
 - Are there more plastic items in the room than non-plastic items?
 - Of the items made from plastic, which ones look as if they will be used once, then thrown in the landfill? *These become **solid waste**.* Which will be recycled? These are known as **recyclables**.

Procedure

Note: If you do not want students to complete their own plastic container sorting sheets, the activity can be done as a class using large sorting circles, with each circle labeled with a plastic container code number.

- A. Discuss with students how our limited crude oil (*fossil fuel*) reserves can be made to last longer. *By conserving fuel and by reusing, using fewer, and recycling products that are made from crude oil (e.g. plastic).* Remind students that plastic is made from *petroleum*, which is made from crude oil.
- B. Explain to students that people can recycle plastics so less crude oil will be necessary to make new products from plastics. Show students that there are different types of plastic containers and bags, most of which are coded with a number. The number is usually embossed or printed on the bottom of the container or bag, and it identifies the type of **resin** from which the plastic bag or container was made. Because the different resins have different chemical compositions, they cannot be recycled together. Therefore, recycling companies separate plastics into categories, based on their resin number. In many communities, people are only able to recycle certain types of plastics. As an exercise:
 - Provide each pair/group of students with a variety of plastic containers and pieces of plastic bags with different code numbers.
 - Have students cut out the container code numbers on the “I Can Sort Plastics” sheet, and organize them in a row (either on their desks, or on the floor). Make sure students leave 12”-24” of space between each label.
 - Discuss with students what plastics are recyclable in their communities, and help them identify which items in their collection of plastics are recyclable in their community. (*Use the CVSD Residential Curbside Services Guide as a reference.*)
 - Have students sort items according to their container code.
 - Discuss the differences that students observe between each type of plastic.

Discussion / Questions

1. What is plastic made from? *Petroleum (as well as, natural gas).*
2. What is petroleum made from? *Crude oil.*
3. What category of natural resources is crude oil? *Fossil fuel, which is an energy source.*
4. Is there an unlimited amount of petroleum for us to use? *No*
5. How can we make the amount of petroleum that is left last longer? *Use only what is needed; don't waste it; recycle it if it can be recycled in your community.*
6. What can be used instead of disposable plastic? *Use the type of plastic that can be used many times; use items made from materials that can be recycled.*

I Can Sort Plastics

