

Pre-Visit Lesson: *Blue Barrel Basics*



At a Glance:

In this pre-visit lesson, students identify what can be recycled in the City of Tucson's recycling program. Students review methods of reducing, reusing, recycling, and waste diversion. They work together to identify ways to apply these methods to a variety of consumable products.

Arizona Department of Education Academic Standards:

Please refer to the Arizona Department of Education Academic Standards section for the ADE standards addressed by this lesson.

Learning Objectives:

Students will be able to:

- define reduce, reuse and recycle.
- describe ways that materials can be reduced, reused, and recycled.
- describe examples of waste diversion.
- identify recyclable and non-recyclable materials in the City of Tucson's recycling program.

Materials:

- Student Worksheet: *Blue Barrel Basics* – photocopy one per student or group

Procedure:

1. Explain to the students that during this lesson they will learn about the City of Tucson's re-cycling program in preparation for their upcoming *Talking Trash in Tucson* presentation.
2. Ask students: What are the 3Rs? Briefly review the definitions of the 3Rs (reduce, reuse, and recycle), and ask students to provide examples:
 - Reduce - The process of decreasing the amount of waste generated.
 - Reuse - The process of using an object more than once in its same form for the same purpose or for different purposes to extend the life of the object.
 - Recycle - The process of collecting, sorting, processing, and using already manu-factured materials for remanufacturing products.
3. Explain that the amount of waste that goes to the landfill can be decreased by using the 3Rs and by using waste diversion options, such as composting. Composting is the process of collecting food scraps and yard trimmings, and storing it under conditions designed to help it decompose naturally. The resulting compost can then be used as a natural fertilizer. Composting helps keep a lot of waste out of the landfill.

Pre-Visit Lesson: Blue Barrel Basics *(continued)*

4. Ask students: *What types of items belong in your Blue Barrel recycling bin?* Plastic bottles, jugs, and containers; paper (such as notebook paper, mail, newspaper); cardboard (such as shipping boxes, cereal boxes, and shoeboxes); and metal (such as aluminum and steel cans, and aluminum foil pans). All items need to be empty, clean, and dry, and larger than a tennis ball.
5. Ask students: *Do you use a Blue Barrel for recycling at home? If not, do you take your recyclables to a Neighborhood Recycling Center?* We can put all of our recyclables into one recycling container; this is called single stream recycling. Even if families don't have their own Blue Barrel, there are numerous Neighborhood Recycling Centers located across Tucson. A map can be found at: www.tucsonaz.gov/es/neighborhood-recycling-centers.
6. Ask students: *Where does your recycling go once it is picked up?* Tucson's recycling is taken to the Republic Services Materials Recovery Facility (MRF) where the different types of items (paper, plastic, aluminum, steel/tin, etc.) are sorted, bundled, and then shipped out to places in Arizona, across the U.S., and all over the world to be recycled. Tucson's MRF is located near E. Ajo Way and S. Alvernon Way.
7. Hand out the Student Worksheet: *Roll Out the Blue Barrel*. Have students work individually, in pairs, or in small groups to complete the table in Part One. For each item, they need to determine the following:
 - What is the original source (from which natural resource does the product originate: trees, petroleum, metal, sand)?
 - Can the product be reduced, reused and/or recycled?
 - Is there a waste diversion option for the product?
 - Must the product be thrown away in the garbage?

Students should “test” themselves to see how much they already know about what can go into the Blue Barrel, but they can refer to the Display Sheet as needed.

8. When students are finished, review each of the items in the table, calling on different students or groups to answer. Remind students that glass is no longer acceptable in recycling bins, but it will be reused by the City; bring glass food and beverage containers that are empty and clean to large purple collection bins at drop-off sites around Tucson: tucsonaz.gov/es/announcement/glass-reuse-plan. Also, plastic bags, Styrofoam, and hazardous materials cannot be recycled in Tucson's Blue Barrels.

Pre-Visit Lesson: *Blue Barrel Basics* *(continued)*

Extension Ideas:

- Learn more about recycling and waste management in Tucson by visiting the *Do More Blue* website at tucsonaz.gov/environmental-services.
- Learn more about Republic Services' Materials Recovery Facility (MRF) in Tucson at republicservices.com/locations/arizona/tucson-trash-pickup-and-recycling.

Student Worksheet: Blue Barrel Basics

Name: _____ Class/Period _____ Date _____

Instructions:

Complete the following table by answering these questions:

1. What is the original source material of the product (does it come from trees, petroleum, metal, or sand)?
2. Think of ways you can reduce your use of the product or reuse the product.
3. Decide if the product can be recycled in your Blue Barrel, if there is a waste diversion option, or if it needs to be thrown away in your trash can.

Original Source	Product	Reduce	Reuse	Recycle	Waste Diversion	Trash
	Notebook paper					
	Margarine tub					
	Corrugated cardboard box					
	Plastic grocery bag					
	Plastic shampoo container					
	Cardboard egg carton					
	Milk and juice carton					
	Colored paper					
	Juice pouch					
	Juice box					
	Styrofoam egg carton					
	Paper bag					

Student Worksheet: Blue Barrel Basics (continued)

Original Source	Product	Reduce	Reuse	Recycle	Waste Diversion	Trash
	Glass soda bottle					
	Plastic water bottle					
	Newspaper					
	Yard waste					
	Aluminum can					
	Packaging peanuts					
	Steel/tin can					
	Whipped cream can					
	Cereal box					
	Paper towel					
	Apple core					
	Paperboard (cereal box)					
	Old t-shirt in good condition					
	Glass applesauce jar					
	Magazine					
	Toilet paper tube					
	Plastic berry container					
	Plastic soda bottle					