



Lesson 9

RECYCLING AT HOME

Lesson Focus

In this lesson, students will sort trash they have brought from home into recyclable, specialty business recycling, or trash for the landfill.

Lesson Objective

- Students will be able to define trash and recycling.
- Students will be able to give two reasons why recycling is important.
- Students will be able to distinguish whether a household waste item is recyclable or trash for the landfill.

Grade Level 3	Duration 50 Minutes	Subject Area Science	Vocabulary recycle, trash
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Louisiana Student Standards for Science

3-LS4-4

Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

Materials List

Per Student

- 1 bag with 5 clean household trash items
- 1 copy of **Activity Sheet #1**

Per Pair of Students

- A bag with 6 trash items that the teacher makes (*see advance preparation*)

Per Class

- 3 empty cardboard boxes labeled: recyclable, specialty business recycling, and trash for the landfill
- 1 large box to hold all the collected trash items that the students bring from home
- 1 copy of **Activity Sheet #2** for reference

Activity Sheets

- Recycling Data Sheet
- Where To Put My Waste

Advance Preparation

1. A few days before this lesson is to be taught, ask students to bring to school five clean, household trash items that they think can be recycled and a few that they think cannot be recycled.

2. Collect the items they bring and put all the items into one large box. The box should be filled with an assortment of recyclable items, trash that cannot be recycled, as well as items that can be recycled at certain businesses, which we are calling “specialty business recycling.” You should add specialty recycling items such as empty printer cartridges, charging cables, batteries, etc. to the box. See **Activity Sheet #2** for a detailed listing of recyclable items, trash, and specialty recyclables.
3. Gather individual bags so that each student in your class will have one bag.
4. From the large box of items that you collected from the students, fill a bag for each student with three items. Be sure that each bag has at least one item that cannot be recycled such a glass light bulb, Styrofoam, photographs, or a straw.
5. Prepare three cardboard boxes with labels: recyclable, specialty business recycling, and trash for the landfill.

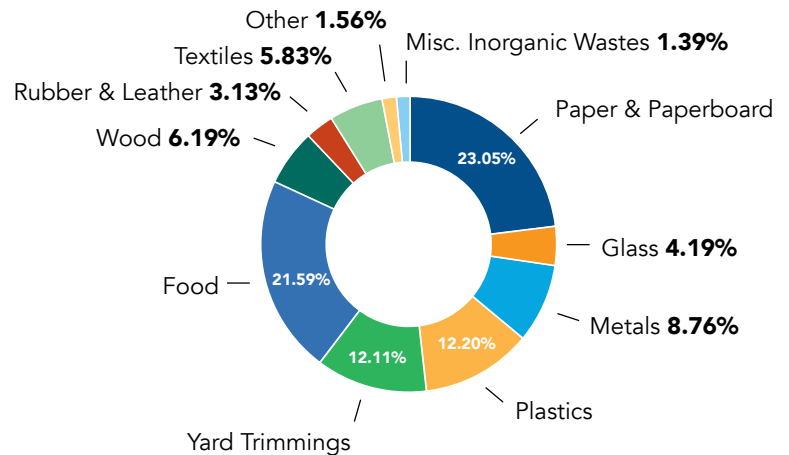
Background Information

Most of us don’t spend a great deal of time thinking about how much trash we generate. In 2018, Environmental Protection Agency estimated that each person in the United States generated 4.9 pounds of trash per person per day (EPA, 2022). This totals 292.4 million [U.S. short] tons of trash. Of this amount, nearly 69 million tons, or roughly a quarter, of the trash was recycled. About half of the 292.4 million pounds of trash was landfilled.

Much of the **trash**, or the items consumers throw away after they are used, can be **recycled** or used to produce materials that can be used again. In Figure 1, the graph shows the proportions of the various types of municipal solid waste (household trash). As can be seen, many of these materials can be recycled. Recycling is very important because it keeps unnecessary materials out of the landfills and leaves more room for materials that cannot be recycled.

Knowing what can be recycled and what needs to be thrown away is an important step in how to manage our waste properly. Many household items can be recycled but are not. At the end of this lesson is a listing of what can be recycled and what should be tossed into the trash. Some items can be recycled (electronics, batteries, plastic grocery bags, etc.) through specific recycling efforts of retailers. We are referring to this as Specialty Business Recycling.

Total MSW Generated by Material, 2018
292.4 million tons



Total municipal solid waste generated by material, 2018. (EPA 2022)

References

- US Environmental Protection Agency. (2022). National Overview: Facts and Figures on Materials, Wastes, and Recycling. Available at <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>
- This lesson has been modified from Vermont Department of Environmental Conservation. <https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/Don't%20Throw%20Away%20Our%20Future.pdf>

Procedure

Engage – 10 Minutes

1. Watch Learn Bright, Clarendon Learning. (2021) **Recycling for Kids** <https://www.youtube.com/watch?v=Fex-wvrOZf4> (6:38) This video covers the basics of recycling for children.
2. Ask students:
 - **What is recycling?** It is taking used materials and turning them into new products that we can use again.
 - **Why is recycling important?** It helps to protect our natural resources like energy and water, and it reduces waste.
 - **What are the three steps to successful recycling?** 1) Collecting recyclable materials. 2) Sorting the recyclable materials by categories. 3) Processing the materials at a facility to prepare them to be made into another product.
 - **What are the three Rs?** Reduce, Reuse, and Recycle.

Explore - 15 Minutes

1. Distribute **Activity Sheet #1** and one bag containing three household trash items to each student. Have students work together in pairs for this activity.
2. Ask students:
 - **What is trash?** It is something that is used and then discarded.
 - **Where does trash go?** Garbage trucks collect trash from the receptacles placed on the curb at our home or from a dumpster at a business. The trash is taken to a landfill.
 - **What does it mean to recycle?** Recycling is when certain items are collected, sorted and processed into new or different items. Recycling keeps trash out of the landfill.
3. Working together, the pair of students should examine the items in their bags. Using **Activity Sheet #1**, they will write a description of the items, determine if the item is recyclable (i.e. newspaper, plastic bottle, aluminum can), a specialty business recycling (i.e. ink cartridge, plastic grocery bag, battery), or trash for the landfill (i.e. Styrofoam egg carton, plastic film, plastic straws) and put a tally mark in the appropriate column. If the item is made of plastic, they should look for the plastic recycling number on the item and enter the number in center of the recycling icon ♻️.
4. Students should add the tally marks in each column and complete the sentences at the bottom of **Activity Sheet #1**.

Explain - 25 Minutes

1. Place the three labeled boxes: recyclable, specialty business recycling, and trash for the landfill in front of the classroom.
2. Have each pair of students choose one or two items from their bag. Taking turns, they will describe the items to their classmates. They will then decide if the item can be recycled or not and place it in the correct labeled box. The students should explain how they made their decision.

Expand – 15 Minutes (Optional)

1. Watch, **Why Is Recycling Important for Kids**, https://www.youtube.com/watch?v=l8Kny-t_nps (11:16)
2. Ask students:
 - **How many pounds of trash does a single person throw away?** *Over four pounds.*
 - **What is a landfill?** *A landfill is a place where trash is buried.*
 - **What are some items that can be made from recycled paper?** *Toilet paper, tissue paper, newsprint, school paper, and paper plates can all be made from recycled paper.*
 - **How many trees can 1 ton of recycled paper save?** *One tree.*
 - **How many times can plastic be recycled?** *Multiple times.*
 - **How long does aluminum last on the Earth's surface?** *Over 500 years.*
 - **Are old computers recyclable?** *Yes, you should check with your local recycling providers to find a business in your area that accepts them.*

Take Action

1. Students should share what they learned with their parents. Together they can identify all the household items that can be recycled and make a list of them. Post the list on the refrigerator door as a reminder to not throw those items in the trash can.
2. Have students write a letter to the principal explaining why recycling is important and giving two examples of items that can be recycled at school and at home.

Evaluate - 5 Minutes

1. **Activity Sheets #1** can be assigned a grade.

Online Resources

Generation Genius. (n.d.). **Reducing Our Impact on the Earth.**

<https://www.generationgenius.com/videolessons/reducing-our-impact-on-earth-video-for-kids/>

This website includes 5E lesson plans, reading material, quiz games, DIY activities and more. Requires creating a free account.

Homewood Disposal Service. (n.d.). **Planet Protectors: Teaching kids how to recycle and save the environment.** <https://mydisposal.com/kids>

This website has videos, stories, activities, and recycling education kits.

Learn Bright, Clarendon Learning. (2021). **Recycling for Kids.**

<https://www.youtube.com/watch?v=Fex-wvrOZf4> (6:38)

This video covers the basics of recycling for children.

SciShow Kids. (2016). **How Recycling Works.**

<https://www.youtube.com/watch?v=VIRVPum9cp4> (4:09)

Humans make a lot of trash every day. The video discusses what happens to our waste and how it is recycled.

Children's Books

Estrada, E. (2021). **I Choose to Reduce, Reuse and Recycle.**

Independently Published. ISBN-13: 989-8513457299

Written in poetic verse, this book teaches green practices and how taking small steps will positively impact the earth. Ages 4 - 10 years.

Read aloud at <https://www.youtube.com/watch?v=5zu5jQspcT8> (4:18)

Green, J. (2005). **Why Should I Recycle? Helping Kids Take Care of Planet Earth.**

Sourcebooks Explore. ISBN-13: 978-0764131554

This book shows children the importance of recycling things we might normally throw away.

Ages 3 - 6 years. Read aloud at https://www.youtube.com/watch?v=vaHmtCA_BjM (3:15)

Tornio, S. (2021). **This Class Can Save The Planet. Be a Good Human Company.**

ISBN-13: non – a Kindle edition book

This book shows children they can have an incredible impact on the Earth if they work together. It shows students what they can do to make a difference. Ages 4 - 12 years. Read aloud at

<https://www.youtube.com/watch?v=2iB23uVKHVw> (2:46)

Weitzman, E. (2016). **10 Things You Can Do to Reduce, Reuse, and Recycle.**

Children's Press. ISBN-13: 989-0531227602

This book shows children it is easy to recycle and reduce the amount of trash we produce. Ages 7 - 8 years.