

BECOME A WASTE HERO

REDUCE TO ZERO

Recyclable, Non-Recyclable,
and Potential Recyclables

Level 2 Beginner Lesson



Lesson Prep & Curriculum Alignment

Prep time: 10 – 15 minutes

Students will learn about the recycling process and how improperly recycled items can cause problems or contaminate other recyclables. They will work in small groups, practicing collaborative and critical thinking skills, to sort cards with pictures of common items into recyclables, non-recyclables, and potential recyclables, then decide how some of the potential recyclables can be made fully recyclable.



1

Print or display as many as needed of the following materials:

- Deck of Cards, one deck per student group
- The handouts (“YES/NO”, “Can it be recycled?”)

2

Use the presentation slides for this lesson to guide a class discussion about what can and cannot be recycled and also the steps to prepare an item to be recycled.

Lesson Prep & Curriculum Alignment

Prep time: 10 – 15 minutes

Key Learning Outcomes and Curriculum Alignment:

- **Science - Earth and Human Activity:** Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. Things that people do can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.
- **Social Studies - People, Places, and Environments:** Students study people, places, and environments which enables them to understand the relationship between human populations and the physical world.
- **English Language Arts and Literacy:** Able to ask and answer questions about details in a literature text. Participate in collaborative conversations with diverse partners about topics and texts. Follow agreed-upon rules for discussions. Use words and phrases acquired through conversations, reading and being read to, and responding to texts.

SDG Alignment



Flexible and adaptive lesson

Lesson plans are designed to be flexible and responsive to the evolving needs of your classroom. Lessons are editable and customizable to meet the different individual student and classroom contexts. A PowerPoint version with teacher instructions and a printable PDF lesson are available for download.

The Lesson

Lesson duration: 45 - 60 minutes

1

Introduce the lesson with the slideshow and a brief discussion on what students already know about recycling.

- What is recycling?
 - Why do we recycle?
 - What kinds of things do you think can be recycled?
 - Are there things that cannot be recycled?
 - What things shouldn't be put in the recycling bin?
 - What are the "1-2-3's" of recycling?
-
- Display or ask the students to get out their YES/NO handout.
 - Display slides and ask why the recycling bins are bad or good? Allow them to identify reasons for each picture based on their YES/NO handout.
 - Discuss how some items can be recycled but because they are dirty, they cannot (contamination makes other recyclables dirty and unable to be recycled). Review examples and the 1,2,3 steps to recycling correctly.
 - Show Recycling Bin / Non-Recycling Bin slides and ask why is one bad and one good? Allow them to look and identify reasons for each picture based on their YES/NO handout.

The Lesson

Lesson duration: 45 - 60 minutes

2

Explain to students that sometimes it is difficult to figure out if an item is recyclable or not. Tell them they will need to be a “Waste Hero” and divide them into groups and sort a deck of cards showing three kinds of items: recyclables, non-recyclables, and items that are *potentially recyclable* – that is, we need to do something to each one of those items to recycle it correctly.

Recycling Tips: Discuss these commonly seen potentially recyclable items and tips for recycling them correctly.

- Items made of a single recyclable material may need an extra step to recycle them correctly. Can you think of anything this applies to?
- Here are some examples:
 - We all know that cardboard is recyclable. But with things like a used pizza box, we can only recycle the part that is clean. We need to throw away any part that is greasy or has food residue because it can contaminate a whole load of recyclables.
 - That goes for plastic containers too, like bottles and jugs, we need to rinse them out so there is no food or liquid left inside, and then let them dry.
 - And if we have the cap, we should put it back on after it is rinsed and dried, before putting the bottle or jug in our recycling container. Remind students that we always want to recycle as much as we can, but we do not want to let things be recycled that can contaminate other recyclables or cause problems at the recycling center.

Here is another tip: Items that are smaller than an ID card or credit card can get jammed in recycling machinery, so things like loose, small plastic caps and lids should be put in the trash, if they are not screwed on the original bottle or jug.

The Lesson

Lesson duration: 45 - 60 minutes

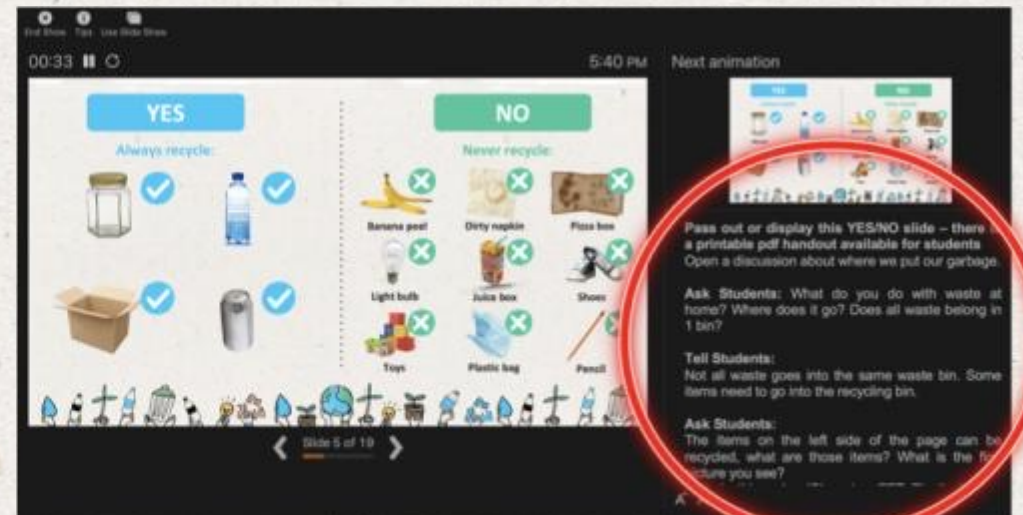
- 3** Give each group a worksheet and a shuffled deck of cards containing intermingled pictures of recyclable, non-recyclable, and potentially recyclable items.
- 4** Tell the groups that their task is to sort their deck of cards into three piles: **recyclable items, non-recyclable items, and five items that are potentially recyclable.** Once they have finished sorting, each group should work together to complete the worksheet by listing the five items they identified as potentially recyclable and, for each one, writing a brief explanation of what needs to be done to make it recyclable.
- 5** Have each group present **one potential recyclable item and what must be done for it to be recyclable.** Discuss any items that were incorrectly identified as potential recyclables and any that were overlooked.

Prepare the PowerPoint presentation

When you are ready to present the lessons to your class click on **Slide Show** on the top menu bar then select **Presenter View**. In Presenter view, you can see your notes as you present while the audience see only your slides.



The notes appear in a pane on the right. The text should wrap automatically, and a vertical scroll bar appears if necessary. You can also change the size of the text in the Notes pane by using the two buttons at the lower left corner of the Notes pane.





Glass jar



PET Plastic bottle



Shoes



Metal can



Light bulb



Juice box



Dirty napkin



Pencil



Plastic bag



Toys



Cardboard box



Garden hose



Banana peel

YES

NO



YES

Always recycle:



Glass jar



PET Plastic bottle



Cardboard box



Metal can

NO

Never recycle:



Banana peel



Dirty napkin



Garden hose



Light bulb



Juice box



Shoes



Toys



Plastic bag



Pencil



Recycling bin



Clean



Dry



No smell



No plastic bags



No non-recyclables



Non-recycling bin



Food



Dirty or wet paper and cardboard



Liquid in bottles



Dirty cups



Plastic bags



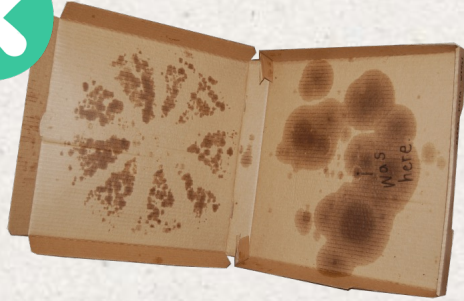
Recycling Contamination



Recycling contamination occurs **when waste is sorted into the wrong recycling bin** (placing a banana peel into a mixed paper recycling bin for example), or when PET plastic bottles are not properly emptied and cleaned leaving the whole bin wet.



What can be recycled but sometimes is not? Why?



Greasy pizza boxes with food still inside cannot be recycled.



Jars with food still inside cannot be recycled.



Dirty bottles with grease, pesticides, or other chemicals



Solid food inside the tin can cannot be recycled.



Bottles with even a little liquid cannot be recycled.



Landfill



When recyclables are contaminated, they end up as garbage that goes to a **landfill**.



How long does it take a cardboard box to disappear in a landfill?



3 Months

How long does it take a metal can to disappear in a landfill?



150 years

How long does it take a PET plastic bottle to disappear in a landfill?



450 years

How long does it take a glass jar to disappear in a landfill?



4,000 years

The

3

Steps to Recycling



Step 1 Know what you can recycle.



Glass Jar



PET Plastic bottle



Cardboard box



Metal can



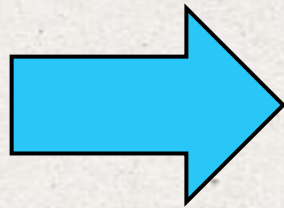
Step 2 Empty, clean, and dry before putting in the bin.



Step 3 Put recyclables into the correct recycling bin.



When we clean, dry, and recycle we can make new things.

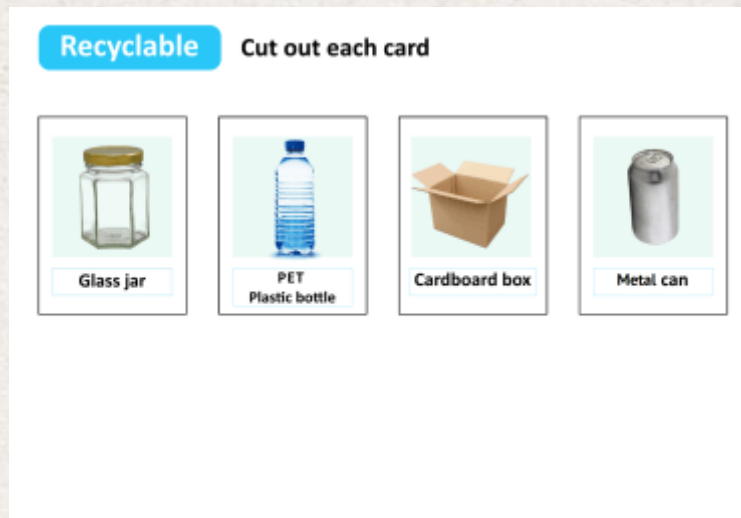


Next Steps

1

Explain to students that sometimes it is difficult to figure out if an item is recyclable or not. Tell them they will need to be a “Waste Hero” and **divide them into groups and sort a deck of cards showing three kinds of items: recyclables, non-recyclables, and items that are *potentially recyclable*** – that is, we need to do something to each one of those items to recycle it correctly.

Print out the following and have the students cut out each card for the activity. **Give each group a worksheet and a shuffled deck of cards containing intermingled pictures of recyclable, non-recyclable, and potentially recyclable items.**



Next Steps

2

Tell the groups that their task is to sort their deck of cards into three piles: **recyclable items, non-recyclable items, and five items that are potentially recyclable.** Once they have finished sorting, each group should work together to complete the worksheet by listing the five items they identified as potentially recyclable and, for each one, write a brief explanation of what needs to be done to make it recyclable.

Can it be recycle? **WASTE HERO**

| Contaminated Item | How to get it ready to be recycled? |
|-------------------|-------------------------------------|
| | |
| | |
| | |
| | |
| | |

3

Have each group present **one potentially recyclable item and what must be done for it to be recyclable.** Discuss any items that were incorrectly identified as potential recyclables and any that were overlooked.