



Recycling Matters

Student Objective

I have a general understanding of why it's important to recycle and I know what can be recycled.

Materials

- 1 One 5-pound bag of sugar or flour**
- 2 A couple of empty recyclables**
(easier to carry if you place in a reusable or paper bag)
 - water bottle
 - milk jug
 - beverage/soup can
 - cardboard box
 - cereal box
- 3 A couple of items that aren't recyclable**
 - plastic fork
 - paper towel
 - toothpaste tube
 - tissues
 - frozen veggie bag or saran wrap
- 4 WiFi access to watch a video**

Introduction: 5 lb bag

Bring in a bag of sugar or flour for students to pass around in order to wrap their minds around how much garbage the average person makes each day (4.4lbs according to EPA - so close to a 5lb bag).

I'm passing around a 5lb bag of sugar. The average person makes about 4.4 lbs of garbage every day.

Talk about how we can make that bag lighter by pulling out the things that are recyclable. And why that matters.

If we wanted to create less garbage, we could pull out the recyclables.

Discussion: Everything we use is made from something in nature

Talk about how everything we use and make comes from something in nature. If we recycle then we get to use it again without digging more holes or cutting down trees (keeping concepts super simple).

Pass around some empty recyclables as well as some commonly mistaken non-recyclable items and talk about them.

Can you recycle this can? (yes!)

What about this plastic fork? (no!)

Talk about one of the things that makes recycling so cool (big machines!) and why it matters that we recycle the right things (less in landfill and better for our future).

Show students a kid-friendly MRF tour video from YouTube, or the following video about aluminum cans.

<https://www.youtube.com/watch?v=BXHPNgww5Q8>

<https://www.youtube.com/watch?v=FnKjVtqLueM>



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Student Objective

I understand the energy and water savings that takes place when I recycle the correct materials. I know how to take steps to find the resources I need to know what is recyclable in my community.

Materials

- 1 One week's worth of recycling collected from each student's house
- 2 A scale
- 3 An empty recycling bin
- 4 WIFI and a computer to access local recycling information, the It's All You page and the EPA WARM model

Introduction: Recycling

Introduce students to the concept of recycling by explaining that items that go in the recycling can live on to become something new, unlike items that go in the garbage.

Explain that recyclable items are made come from resources in nature:

- Aluminum = aluminum ore that is mined
- Glass = Sand and minerals that are heated
- Plastic = Oil that is extracted from wells
- Paper = Trees that are processed

Recyclable materials are made from resources in nature, when you recycle, you save those resources from being extracted and the energy and water that goes into that process.

Introduction: Home collection

Ask all of the students to collect their recycling at home for one week to bring back to class in order to calculate how much energy and water they save by recycling.

Before sending students home with their mission, visit your local community's recycling webpage to make sure they are collecting the correct items.

Let's look up what we can recycle at home, to make sure we collect the correct items because recycling the wrong items can do more harm than good.

Activity: Weight Assessment

Refresh students of the discussion from last week about the resource and energy savings that occurs when the correct materials are recycled.

Weigh the recycling bin to get an assessment of the tare weight (this weight will need to be subtracted from the material weight).

Place each students recycling contribution in the container and weigh it. If the students brings in materials that are not recyclable, take those out and explain that they are not recyclable.

Use the scale to weigh each of the students recycling materials, subtracting the weight of the container.

Total weight - Tare weight = Material weight



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Activity: Water Calculation

Add each student's material weight together to come up with the total weight for the class.

Visit the It's All You page (<https://recyclingpartnership.org/itsallyou/>) to determine how much water the class saves each month by using the water savings calculator.

You can also calculate the water savings using the following equation:

1.5 lbs. of recycling = 3.8 gallons of water savings

As a class we can save (insert) gallons of water by each recycling the materials we collected at home. Water is important because we have to drink it to stay alive and it is home to many aquatic animals.

Activity: Material Sort

Now that all of the material has been weighed, it can be sorted. Designate specific areas to collect the following recycling materials with other like materials:

- Aluminum cans
- Glass bottles
- Plastic bottles

Once all of the materials are sorted, count the number of items in each category:

Number of aluminum cans = _____

Number of glass bottles = _____

Number of plastic bottles = _____

Activity: Energy Calculation

Visit the EPA's energy savings calculator page (<https://www.epa.gov/sites/production/files/widgets/iwarm-skinny.html>) to find your equivalent energy savings for the number of aluminum cans, glass bottles and plastic bottles collected.

Aluminum can energy savings = _____/hrs. of AC
_____/hrs. of computer
_____/hrs. of light

Glass bottles energy savings = _____/hrs. of AC
_____/hrs. of computer
_____/hrs. of light

Plastic bottles energy savings = _____/hrs. of AC
_____/hrs. of computer
_____/hrs. of light

Discussion: Recycling Matters

Reiterate to the class, using the numbers found with the calculator, that recycling saves both water and energy, along with other natural resources.

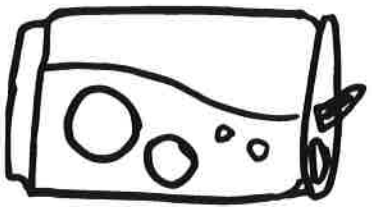
When recyclable items are placed in the garbage, or garbage in the recycling, that energy and water is wasted and cannot be recovered.

You can see from this activity, when you recycle, energy and water are saved, rather than wasted. Energy and water help us sustain life on Earth and are essential to our future and the future of all living things on this planet.

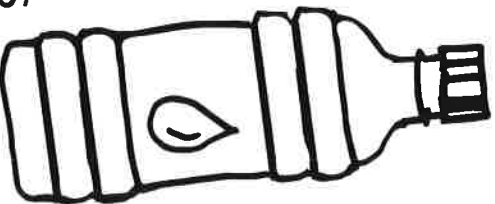
I AM A ♻️ HERO

It's All You
ItsAllYou.org

I RECYCLE



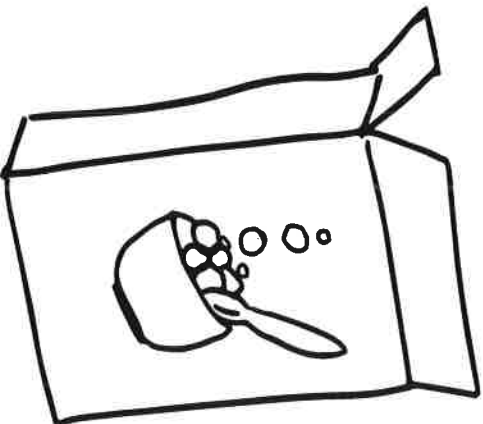
Cans



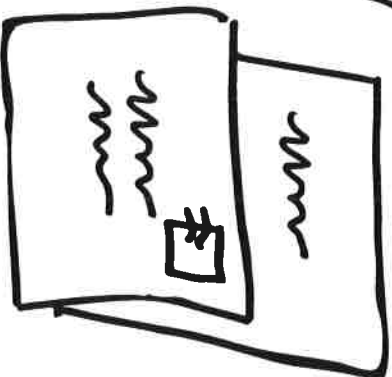
Bottles



Jars



Boxes



Paper

BY _____