

Recycling & The Importance of Sorting Your Food

Grade Range: 6th-10th

Intro

I want you to think about your daily lunch. What do you wrap your lunch in? Better yet, if you order lunch, what containers are used for your food? I know most people, including myself, use plastic wrap or aluminum foil. The lunches bought here are held in paper boats and plastic containers. But where do these materials end up when you're finished eating?

[Experiment]: slideshow or use of actual materials → sorting of different materials

- slideshow OR:
 - five water bottles
 - five paper boats
 - five napkins
 - five bananas
 - five to-go containers (plastic)
- Procedure
 - split into groups of five
 - sort through each of the materials
 - decide which of the materials belong in the compost bin, recycling bin, & landfill bin
- Expected results
 - green bin: napkins & bananas
 - blue bin: water bottles
 - grey bin: to-go containers & paper boats

make sure to add link of where you got the experiment

Explanation of [topic]

- What is it?
 - Now I know you're confused as to why the plastic containers don't belong to the recycling bin. The reason why is because each plastic is assigned a different number. This is because different types of plastics are made of different materials such as PET and PP. These materials cannot be mixed together, hence why plastic identification numbers were established.
 - In addition, you may have noticed that there was a third category. The green bin is for compost and uneaten food. Depending on the kind of composter you have, it can take uneaten food, bones, and napkins!
- Why is it important?

- This experiment is more than just a plan to waste your time. Every year, billions of pounds of unused materials and waste are thrown into landfills in the United States. A lot of the waste thrown into these landfills could easily be recycled or turned into compost! However, when organic waste accumulates in these landfills, through anaerobic processes, methane is created. Methane is the warmest greenhouse gas that contributes to climate change and global warming.

Current Issues regarding [topic]

- What people it affects
 - This is a worldwide issue, and you don't have to live in a certain place in the world to not acknowledge the effects of climate change and global warming.
- The cause of the problem
 - There are numerous causes to climate change. While the one we are focusing on today is methane production in landfills, motor vehicle exhaust, combustion of coal and other fossil fuels, and livestock industries all contribute to this ongoing issue.
- How long ago it was/ or continues to be a problem
 - This issue is ongoing, and seems to be worsening each year.

Solutions

- Small solutions that kids can do
 - What you can do as a UCVTS student is to take the time to sort through your unused materials such as food and other things. Be self conscious of what you throw away, because the consequences would be dire to not only the planet, but us.

Conclusion

- I'm sure most of you didn't realize that there were so many rules regarding sorting your unused materials before throwing it away. I didn't realize this until last year. Here on campus we have the digester, which is located in the Old Tech building in the sustainable classroom. The digester can take up hundreds of pounds of food and transform it into compost! From there, we can use our compost for our gardens, as well as other nearby areas! We must use the technology we have to our advantage in order to make the world a better place and slow the effects of climate change in our world. Now that you know, tell your friends and family to think before they throw away their unused materials!

Sample Lesson

Intro

[If this were to be in person we would have the teacher tell their class to bring a bottle of water to school] Hello class, I first wanted to start this presentation with a little activity, I want you all to take a sip of water. [After they take a sip of water] What you did there is a luxury since not everyone in the world has access to clean water. [have a smooth transition from that to explaining what water is]

Demo

Capillary Action Experiment

- Materials
 - Two beakers
 - Water
 - Paper towel
 - Optional: food dye
- Procedure
 - Fill one beaker halfway with water
 - Put food coloring in water so it's easier to see results
 - Place the two beakers ~2 feet apart
 - Fold up paper towel until it's thin and place each end on each beaker
 - Wait to see the water travel
- Expected results
 - Water will move up the paper towel

make sure to add link of where you got the experiment

Link: <https://www.youtube.com/watch?reload=9&v=mdkeZbm0cCl>

Explanation of water

- Water is a substance made out of hydrogen and oxygen. Water is the main constituent of earth and is a great portion of what our bodies are made of. There are also two types of water: salt and freshwater. Freshwater is the type we use to drink but there is only 1% of accessible freshwater.
- Water has many properties that make it important. For instance, as shown in the demo, capillary action is when water has the ability to stick to the sides of the paper towel (adhesion) and as the water traveled up the paper towel, it stuck to other water molecules (cohesion). Some biological applications are water traveling up the roots of plants and blood traveling through our capillaries.

Why is it important?

- Water is important because humanity relies on water to drink it, clean ourselves and other things with it, in industrial buildings, and in agriculture. Other organisms also use water to drink, clean themselves, and sometimes it's their habitat.

Current Issues regarding Water

- Some issues pertaining to water are water pollution and shortage of water.
- What people it affects
 - This affects all sorts of people especially in impoverished areas and places that had a water disaster. Ex- Nepal and Flint, Michigan respectively

- The cause of the problem
 - The most common causes are industrial waste, sewage and waste dumping, and chemical fertilizers and pesticides.
- How long ago it's been a problem
 - It's been a problem for many decades and sewage and waste dumping has been a problem for centuries.

Solutions

- Closing the faucet
- Not using as much water, being mindful of the the water you use

Conclusion

- Although there are many issues pertaining to water, it is important to know the importance of water in order to be more mindful of your habits in order to make a difference in your own community. Every little action counts!