Rethink Trash!

Estimated Time: 45 minutes each day throughout the week

SUMMARY
In this activity, students will investigate ways they can reduce, reuse, and recycle trash that their family generates while making dinner throughout the course of a week. Much of the trash we generate can be reduced, reused, and recycled after we identify and quantify the types of items we throw away.

WHAT YOU'LL LEARN

- What types of trash you and your family produce throughout the course of the week from dinner preparation.
- How you can reduce, reuse, and recycle the waste you and your family generate

Materials Used	Resources Used
● All trash generated from the preparation and then eating dinner. ● Containers to hold various types of trash generated from dinner. ● Scale to weigh trash.	● Make the Most of Compost Video: https://www.youtube.com/watch?v=Q5s4n9r-JGU ● 10 Simple Ways to Reduce Plastic Waste Video: https://www.youtube.com/watch?v=_XVUux3boWk

WHAT TO DO

How much trash is produced when making dinner?

1. As you are making dinner and then after dinner, save all the items that would go in the trash, recycling bin, or compost if you recycle and compost. Place all these things in a container.
    a. You may want a separate container for items that are wet and those that are dry to keep all the trash from becoming really gross.
    b. Work with your student to sort the trash items into like items such as those things that must go into the landfill, those that can be recycled, and organic materials like plant-based food waste that might be compostable.
2. After sorting the trash, make a data table recording sheet (like the one below) to list the weight of all the items that you used to make and eat dinner, how you and your family dispose of this item, and how much of that item you dispose of (weight).

Day of the week:				
List of items	**Where can it go? Landfill, Recycling, or Compost**	**Can we change our use of this object**		**Weight (g)**
Paper towels	Landfill			42 g
Sweet potato skins	Compost			17 g
Plastic produce bag	Landfill			1 g
Can of beans	Recycling			50 g
	Landfill Total	Recycling Total	Compost Total	
Daily total	**43 g**	**50 g**	**17 g**	**110 g**
Day of the week:				

3. After reviewing all these items with your student, brainstorm ways you and your family can reduce the amount of waste that will end up in the landfill. An example from the table above may be paper towels that could be replaced with reusable clothes or plastic produce bags that could be replaced with reusable produce bags. If you don't currently compost, you and your student may want to consider making a compost to use at your home.
    a. Check out the activities from STEM @ Home Earth Day to learn how to make a composter at home: http://www.siuestemcenter.org/wp-content/uploads/2020/05/Composting-19042020-1009.pdf
4. Develop a plan to reduce the number of items and weight that will end up in a landfill. Working with your students, try your best to implement that plan.
5. When preparing and having dinner the next day, save all your trash again and see how many times and how much waste you and your family were able to keep out of the landfill.
6. Track your trash production for several days and see if there might be trends in the types of items you use and if there are certain things that you eat that produce more trash, like a carry out meal. Your student can also see if there are products that the family uses that could be purchased differently, like in bulk, to reduce the amount of packaging going into the landfill.

Add Some Math!

7. There are multiple ways to incorporate math into this activity. If you repeat this activity for several days or weeks, you can average the amount of weight you contribute to the landfill, recycling, and compost. If it takes a couple days to implement your reduction plan, you can average your landfill waste before and after your plan. If you want to project how much waste you will keep out of a landfill in a year after your plan is implemented, use the difference between the before and after plan. If each plan covered one week, you can take that difference and multiply by 52 weeks to make your yearly landfill reduction projection!

TIPS

- Scientists use metric units while measuring, but feel free to use whatever units your scale measures.
- This activity can be extended to other rooms of the house as well. Are there items that could be replaced with reusable options in the bathroom? What about the garage or yard?

- This activity can be done long-term, though doing it every day for a month might be too much. Instead, consider doing a “sustainability audit” for a few days once a month. See if your changes have led to better habits in the long term!
- If you don’t want to sort through trash, have your student take a picture of the items that would have been disposed of and then sort out these pictures into the different categories: landfill, recycling, compost. Although you won’t be able to weigh the items, you and your student can compare the before and after implementation plan pictures.