

Name _____

What's In Our Waste Lab

Objective:

To allow students to see the types and amounts of waste that each of us produces by collecting their own garbage for one day.

Materials:

- Large plastic bag (such as a kitchen bag)
- Small zip lock baggies
- Triple beam balances

Procedure:

1. For one day collect your own trash and put it in a large trash bag. Use small zip lock baggies for food waste and other trash that might smell.
2. Bring your collected trash into class on block day and record the mass of each type. (Do not open the food trash baggies; just take the mass with the baggie so that you don't have any health hazards.)
3. Record your results in the data table that follows. To determine what percentage of total trash each item is, add up the mass of all the types of trash and divide each individual category by the whole. For example, if all the paper, food, plastic, metal and glass have a combined mass of 1,000 g and paper has a mass of 100 g, then divide as follows: $100/1,000 = .1$. Multiply your final answer by 100 to get a %. In this example paper is 10% of the total.
4. Throw all food items in the trash and recycle as much as you can. Dispose of non- recyclable items.

Type of Trash	Mass	% of total trash
Paper		
Food (organic)		
Plastic		
Metal (aluminum, etc)		
Glass		
Other		

Type of Trash	Mass	% of total trash
Durable goods (will breakdown)		
Non-durable goods (won't breakdown)		
Containers & Packaging		
Food and yard waste		

Analysis:

1. Add up the total mass of all your trash and then calculate the amount of trash (in kg) you would produce in a year if this were the amount you generate every day. If each person in your family generates the same amount of trash, how much would your family produce in a year?

2. Now, assume you recycled everything that was recyclable in your bag of trash. How many kg of trash would you have to throw away? (In other words, what is the mass of the non-recyclable waste?)

3. What in your trash could you REDUCE? What could you REUSE?

4. What are the environmental impacts of REDUCE. REUSE. RECYCLE? How are they different from each other?

5. How would the mass of your trash differ if you lived in a developing nation?

6. Make a pie graph of your trash and compare it to the US Municipal Solid Waste (MSW):

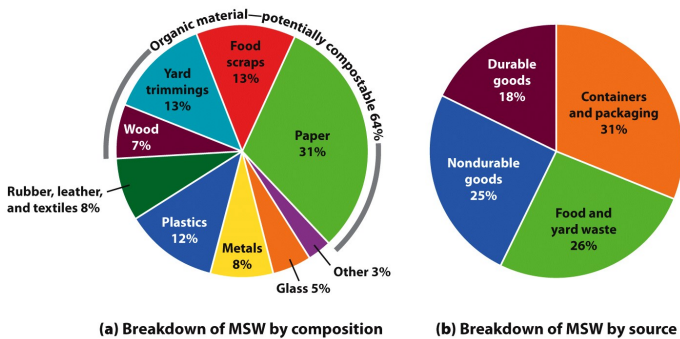
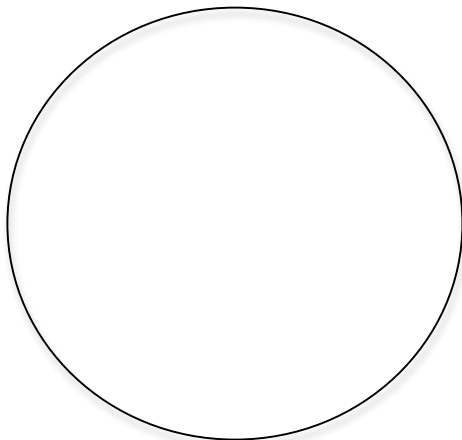
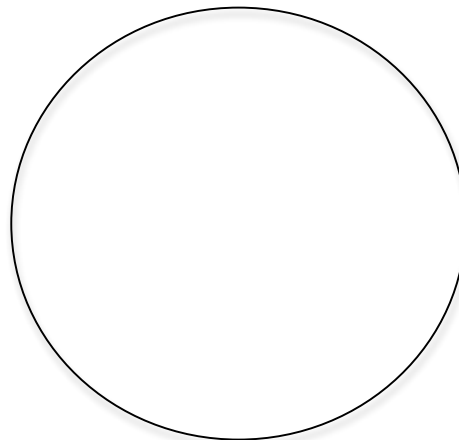


Figure 16.5
Environmental Science
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Breakdown of YOUR waste by composition



Breakdown of YOUR waste by source