



## Food Waste

Name \_\_\_\_\_

### Lunchroom Waste: Single Class

#### Objective

Estimate the amount of waste from cafeteria lunches for your class.



#### Materials

A bathroom or food scale that can measure in ounces

Calculator

#### Procedure

1. Use the scale and record the following weights before and after lunch.

 <p>Weight of empty tray or empty containers if you bring a cold lunch.</p> <p><math>Weight_{EmptyTray} = \underline{\hspace{2cm}}</math></p>	 <p>Record the weight of your <b>uneaten</b> lunch or tray <b>with</b> your food on it.</p> <p><math>Weight_{Tray+Food} = \underline{\hspace{2cm}}</math></p>	 <p>Weigh your tray or lunch containers again <b>after</b> you've eaten but <b>before you throw anything in the trash.</b></p> <p><math>Weight_{Tray+Waste} = \underline{\hspace{2cm}}</math></p>
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2. Using the weights from question 1, write an equation to show how you can calculate the weight of your lunch and the weight of the items thrown in the trash. Calculate the results!

a) The weight of your lunch

$$\text{answer: } Weight_{Tray+Food} - Weight_{Tray+Waste} = Weight_{Food}$$

b) The weight of the waste

$$\text{answer: } Weight_{Tray+Waste} - Weight_{EmptyTray} = Weight_{Waste}$$

3. The weight of waste is the amount of waste from a single student from a single day's lunch. To estimate the total amount of waste for the entire class multiply the waste for a single student by how many students and teachers in a classroom have leftover lunch waste.

$$\text{Weight}_{\text{waste}} \times \text{number of students} = \text{_____ daily waste}$$

4. To find the food waste of the entire year, multiply the total waste per day by the number of school days in a year.

$$\text{Daily waste} \times \text{number of school days} = \text{_____ lunch waste (over the school year)}$$

Scientists usually estimate using a larger number of measurements. For a more accurate estimate of daily waste, use the known weight of an empty tray and measure the  $\text{Weight}_{\text{Tray}+\text{Food}}$  and  $\text{Weight}_{\text{Tray}+\text{Waste}}$  for two or more days. Calculate the average daily weight of lunch and waste over the course of a few days or a week.

#### Thinking Further

5. List some ways to reduce the amount of wasted food from the cafeteria.

6. Does your measurement just include food waste or are there other sources of waste too?

7. What is the importance of reducing waste? What effect does waste have on the environment?

#### Optional Activities

A. Devise a way to account for the solid waste (milk cartons, wrappers, etc.) that is included with the food waste.

B. Do this every day of the week. Create a graph of the results and see if there is a relationship between the day of the week and amount of food waste. Alternatively, do this for different common lunch choices (e.g. pizza, chicken nuggets, salad bar, etc.)