



Waste in Your Community*

Activity M.1/H.f

GRADE LEVELS: 7 - 12

OBJECTIVE: To increase students' awareness of the quantities of waste in their own community and the cost of disposal and management.

VOCABULARY: tipping fees, true costs

PROCEDURE:

Discuss with students the types and quantities of waste they throw out in their own homes. As a homework assignment, have the students collect and weigh all the garbage that their household throws out in 1 day. Make sure they include newspapers, writing paper, bags, bottles, jars, cans, food wastes, yard wastes, and packages.

Ask the following questions:

- How many pounds of garbage does your household throw away each day? (Students will need to weigh bags of garbage at home.)
- How many pounds does one person in your household throw out in 1 day? (Divide first value by number in the household.)
- How does this compare to the national average of 4 pounds per person per day?
- Where else except our homes do we throw things away? (Consider waste generated at school, shopping malls, at a friend's house, etc.)
- Find out the population in your community. Based on the amount of waste generated each day by an individual in your household, answer the following:
- How many tons of solid waste are generated in your community per week, month, and year? (Remind students that 1 ton = 2,000 pounds. You might wish to relate the weight of a familiar object, such as a car, to a ton.)
- How many tons of garbage do U.S. households throw away each year based on your calculations? (U.S. population = approximately 248 million [1989 projection])

Tell students that an estimated 180 million tons of solid waste are generated in the United States each year. This is enough to fill a convoy of garbage trucks reaching halfway to the moon.

Find out from your Department of Sanitation the waste management costs of 1 ton of refuse. (Landfill tipping fees range among communities from \$6 to over \$100 per ton; tipping fees for waste combustion range from \$20 to over \$60 per ton.) These costs may not include the initial capital costs of buying land for building waste facilities or the costs of cleanup of already contaminated areas. The total or true cost of waste management is difficult to assess and far exceeds the day-to-day costs of disposal or combustion. Ask the following questions:

- Based on the cost of managing 1 ton of refuse, how much would waste management cost your community in 1 year?
- Where does this money come from? If this cost were divided equally, how much would your household need to contribute to waste management? Is this more than what you are able to save in a year?

To follow up, find out how much the weight and cost of waste management has changed in your community over as many years as records are available. Graph the results to show the increase. You might wish to have students speculate on the costs of waste management in another 10 years, 20 years, etc., based on current rates of increase.

* Source: U.S. Environmental Protection Agency Let's Reduce and Recycle: Curriculum for Solid Waste Awareness