

Raising the Recycling Bar

Name: _____ Date: _____

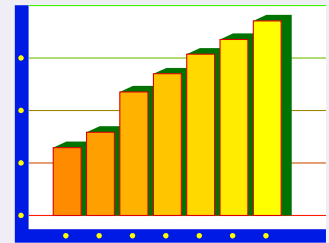
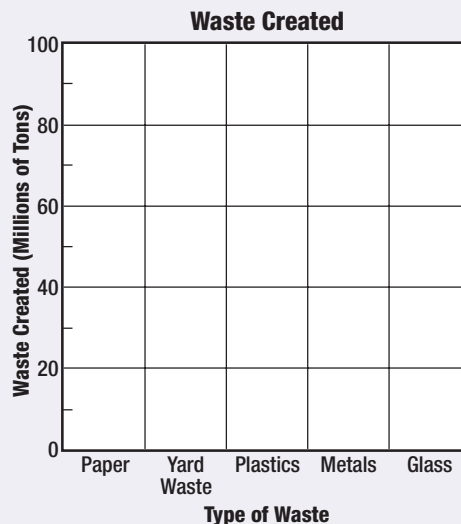
Americans are recycling more than ever before, but some items are still thrown away—especially plastic bags. Plastic bags are a serious problem because they take a long time to decompose. Complete the questions below to see how recycling can subtract plastic bags from the environmental equation.



**Work
the
Math:**

1 Graph It The table on the left below shows different types and amounts of materials commonly found in the average landfill, as well as the amount of each material recovered by recycling. In the blank graph on the right below, create a bar graph showing the amount of each type of waste created.

Type of Waste	Millions of Tons of Waste Created	Millions of Tons Recovered by Recycling	Millions of Tons Sent to Landfill
Paper	84	42	42
Yard Waste	32	20	12
Plastics	30	2	28
Metals	19	7	12
Glass	13	3	10



Raise the Bar!

What you need to know about bar graphs:

- Bar graphs are used to display and compare data.
- Bar graphs have a horizontal X-axis and a vertical Y-axis. The X-axis represents the group of data being graphed. The Y-axis represents the value or number of each group.
- The height of each bar represents a certain amount of data of each group. The higher the bar, the bigger the value or number of each group.



2 On separate graph paper, create a second graph showing the *percentage* of each material that is being recycled. (*Round your answer to a whole percentage.*) For example, if 22 million tons of waste was created and 8 million was recycled, 36% would have been recovered ($8 \div 22 = .36$).

3 If $\frac{3}{4}$ of all plastic waste created was recycled, how many tons of plastic would *end up* in the landfill? _____

4 a. Plastic bags are made from oil. About 12 million barrels of oil are used to make the 100 *billion* plastic bags used in the United States each year. If oil is \$65 per barrel, how much is spent to make plastic bags each year? _____

b. Calculate the quantity of oil saved if 25% less bags were produced. _____

Fun Fact!

In 1990, 16% of waste in the U.S. was recycled. In 2005, that number doubled to 32%. An actuary could calculate that, if the increase remains the same, by 2020, we could be recycling 64% of waste in the U.S.