



SeaWorld/Busch Gardens Nature's Recyclers

9-12 Classroom Activities

Recycling Math

OBJECTIVE

The student will identify how people use the composting process to solve environmental problems.
The student will practice basic mathematical calculations using percentages.

ACTION

1. The day before the activity, ask students to write down ten items they observe people throwing in the trash or items they themselves throw into the trash. Ask students to bring their lists to class the next day.
2. As a class, create a data table listing the items on the students' lists. Keep a tally of repeat items. Count how many items are on class list. Next to the data table write: plastic, aluminum, paper, glass, compost, and landfill.
4. Ask class to guess what percentage of trash items can be recycled and what percentage of items are garbage for a landfill. Write guesses on the board. Either as a class or in cooperative groups, and identify items that can be placed into one of the five recyclable categories with the remaining items going into the landfill list.

Examples of items that can be thrown into the various recycling bins. Aluminum: soda cans, aluminum paper; Plastic: milk gallons, water bottles, food containers; Paper: newspaper, magazines, cardboard; Glass: bottles and jars; Compost: non-meat kitchen scraps, fruit and vegetable rinds and peels.

5. After all the items have been classified into the recycling bins or the landfill, discuss how much of the trash was recycled. Were student guesses correct? Were more items recyclable than thought?
6. Practice percentage calculations using the Recycling Math Funsheet or organize a schoolyard clean up to collect, weigh and calculate a funsheet of your own.

Recycling Math Funsheet

Use this worksheet to calculate the total weight and percentage of recyclable items when compared to the total weight of collected trash.

Students at M.Y. High School USA collected 1,250 pounds of recyclable trash during the school's clean-up week last month. Here is the tally:

<u>item</u>	<u>total weight</u>
aluminum cans	150 pounds
water bottles	20 pounds
flyers, stickers, juice boxes, magazines	300 pounds
discarded school papers, notebooks	400 pounds
apple cores, banana peels, bread crusts	200 pounds
lunch sacks	30 pounds
lost clothes, sneakers, hats	150 pounds

M.Y. High School's Recycling Club is now writing an article for the school newspaper. Help them fill in the blanks. Show your work on the other side of this page.

Congratulations to all students at M.Y. High! Our clean-up week produced 1,250 pounds (that's _____ kg for you metric buffs) of trash. Almost all the items were recyclable. Of the 1,250 pounds, ____ % went into our mixed paper bin, _____% went into the aluminum bin, _____% went into our plastic recycle bin, _____% were donated to charity, and _____% went into the Garden's Club compost heap. Thanks to all who helped. Now let's keep our campus clean!!