Graphing Trash

SUMMARY
Students participate in an activity in which they collect data and present their findings in a visual format while learning which items can be recycled.

OBJECTIVES
- Students will gather and categorize data.
- Students will create and interpret bar graphs.

BACKGROUND
People often discard items without thinking about what they are throwing out, where it will end up, or if there was another use for the item. Many items that end up in the trash can could have been recycled.

ADVANCE PREPARATION
- Collect clean recyclable and non-recyclable items from the classroom or home in a garbage bag. A suggested list of recyclable items may be found on page 50.

PROCEDURE
1. Divide the students into pairs and have each pair pick 10 random trash items from the garbage bag.

2. Lead a class discussion about the different kinds of items each pair of students has. Paper and plastic items will likely be the most common, but the selection may also include wood, cloth, and metal items. It is possible that you will have items comprised of two or more materials.

3. Hand out the Graphing Trash Worksheet and walk through the first two questions with the students. Help them decide on names for the categories of trash and write predictions for each category.

4. Help the students count their trash items and color the appropriate number of spaces for each category. Circulate among the groups and prompt them as necessary to notice categories with the same number of items, categories with no items, and other characteristics of their data.

5. After the exercise, have the students place the items in either the trash can or the recycling bin.

ASSESSMENT
1. Have each group report its findings to another group and compare their graphs. Compare the totals with the predictions.

2. As a class, discuss some of the items that can be reused or recycled. Have the students draw pictures of items that can be reused or recycled on the back of the worksheet.

EXTENSION
1. On another day, have the students choose ten more trash items, graph them by category, and compare the graphs.

2. Have students graph their home trash and compare it with the results of their classroom trash graphs.

Target Level:
Grade 2

SOLs:
Science: 2.1
English: 2.3
Math: 2.23

Materials Needed:
- Bag of clean, safe garbage items (both recyclable and non-recyclable)
- Graphing Trash Worksheet

Time Needed:
One class period

Graphing Trash Worksheet

1. What types of trash do you expect to find?

_____ _____ _____ _____ _____

2. Predict how many items of each type will be found.

_____ _____ _____ _____ _____

3. Write the actual number of each type of trash found.

_____ _____ _____ _____ _____

4. Graph the trash.

10					
9					
8					
7					
6					
5					
4					
3					
2					
1					

_____ _____ _____ _____ _____

Graphing Trash Worksheet Answer Key

1. What types of trash do you expect to find? Depends on your selection of garbage.

PLASTIC   PAPER   METAL   FOOD   OTHER
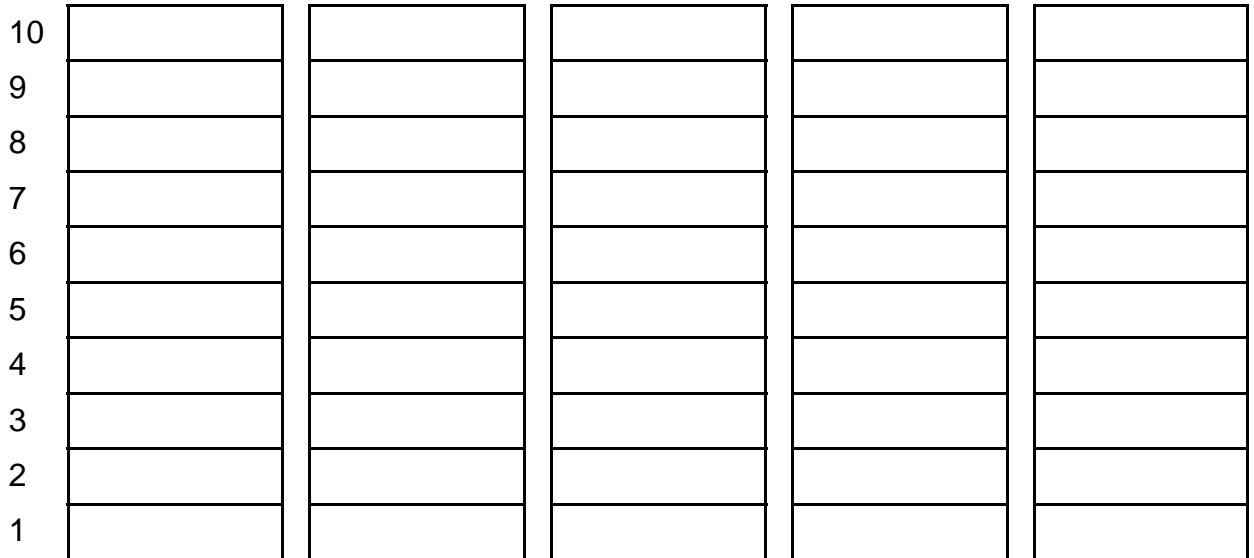
2. Predict how many items of each type will be found.

3   6   1   0   0

3. Write the actual number of each type of trash found.

4   4   2   0   1

4. Graph the trash.

	PLASTIC	PAPER	METAL	FOOD	OTHER
10					
9					
8					
7					
6					
5					
4	▨	▨			
3	▨	▨			
2	▨	▨	▨		
1	▨	▨	▨		▨

PLASTIC   PAPER   METAL   FOOD   OTHER