

Classroom Activity

Home Trash

Standards

Science (K-3): Science as Inquiry 1, 2, 3, 4; Properties and Structure of Materials 1; Ecology 8; Interactions within the World Around Us 3; Technology and Its Influence on the Environment 1

Language Arts: 1, 2, 3

Math: 4, 5, 9

Social Studies: Civics 4; Economics 1, 3

Skills

Predicting, classifying, graphing, following directions, recording data, discussing in groups

Purpose

The students will learn to make predictions about the types of trash generated in their homes.

The students will classify the different types of trash brought in from home.

The students will record their data.

The students will graph their results.

The students will work in cooperative groups, and will be able to discuss their results and report them to the class.

Background

The day before starting this lesson each student is asked to bring to class 3 pieces of trash from home. Each child is given a one-gallon zip-lock bag with his or her name on it in which to carry 3 pieces of trash. After discussing the assignment you may want to give them the fact or myth survey and ask some of the sample questions. This activity may be completed using magazine pictures instead of real trash.

What you need:

Paper grocery bags (5-10)

Index cards for labels

Large floor graph (butcher block paper can be used)

Student log books

Pencils

Crayons/markers

Rubber gloves labeled with the students' names

Students should bring their 3 pieces of trash from home*

*Magazine pictures of 3 different items of trash if teacher chooses not to use real trash

Zip-lock bag

What You do:

Each student should have a bag of trash on his or her desk.

Before looking at the items of trash ask each child to "predict" what type of trash there will be the most of. (It is often necessary to discuss what a prediction is with young children. Emphasize that predictions are not "right" or "wrong" answers.)

Ask students to record their predictions on their science log sheets.

Ask each child to tell (and show) the class what he/she brought in. List all the different items on the board.

After everyone's items are listed on the board, discuss how you can put the items into categories for easier manageability. (Classify.) Allow the class to decide which categories are appropriate (paper, plastic, aluminum, glass, steel, etc.). Show how to tell aluminum from other metals (a magnet will not attract aluminum).



Classroom Activity

Make a label for each category and fasten labels to paper bags. List categories on the board (paper) and on their science log sheets.

Have students place their trash items in the appropriate bags. (In cases where an item is made out of several different materials you may want to use the category that represents what it is mostly made of.)

One student from each team will take a paper bag of trash to the floor graph, use rubber gloves, lay out the pieces in a line, count the pieces, and record the number by the category on the board and on their science log sheets.

Examples

Paper.....	113
Plastic	43
Glass	2
Wood	3
Food	2
Aluminum.....	6
Steel.....	2
Other	10

Discuss – Which was the largest category? Smallest? Why? Have students now record the “actual” results on their science log sheets.

Graph the results. Students will make individual small graphs; teacher will make large graph for demonstration purposes.

Assessment

The students will make their graphs and put them on their science log sheets. Students should also discuss their results on their science log sheets. They can also discuss how trash from home might compare to trash at school. How might trash from home differ from trash from an office or business?

Extension

Students can make different types of graphs to show the same results (pie graph, bar graph, line graphs).