School Trash Mystery Bags

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: 2, 3

Math: 1, 2

Social Studies: Civics 4; Geography 1; History 1

Skills

Predicting, classifying, following directions, recording data, observing, discussing in groups, reporting to the class.

Purpose

The students will learn to make predictions about the types of trash generated in each room.

The students will examine the trash bags and analyze what types of trash are found.

The students will record their data.

The students will determine where their bag of trash came from using the evidence they found in the trash.

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 ask the custodians to save trash in large clear plastic bags from several different rooms in the school. (Try to have a bag for each of the small groups; ex. Kindergarten, gym, office, custodians' room, art room, library, classroom, etc.) Put a number on each bag and keep a list of what room each bag came from.

What you need:

One bag of school trash from different rooms for each group

Pencils

Science log sheets

Blackboard

What You do:

List the different rooms where the bags of trash came from on the board.

Discuss what types of trash might be found in each room.

List four or five ideas under each category. Use these lists to introduce the concept of "critical evidence." (What items could you find that might be used as proof that your bag came from a certain room?)

Discuss the fact that different rooms can also have similar types of trash. List some examples that the students have brainstormed as a group.

Divide the class into small groups and give each group a bag of trash.

Without opening the bag, students are to look at the different kinds of trash in their bag and list them on their science log sheets.

Groups should compare their list with the list on the board and come to a conclusion on which room their bag came from.

Students should star or circle those items on their list which would constitute "critical evidence." (This usually takes about 15 minutes.)

Classroom Activity

When the class is finished the reporter from each group tells which room their group's bag of trash may have come from and gives the evidence the group discovered.

List each group's findings on the board. If there are disagreements among the groups (more than one group may choose the same room) have the students return to their bags and re-evaluate their clues and evidence, and come to a logical conclusion. This may also be done as a whole-group experience.

Utilize the input from the class to help resolve the issue. Discuss how some clues can be misleading. Note similarities and differences in the trash from different rooms.

After all the bags are correctly placed as to origin, discuss which items were really "critical evidence."

Discuss the similarities and differences between home trash and school trash on their science log sheets.

Students should record what type of trash there was the most of in the school bags.

Brainstorm or ask individual students to determine what natural resources were used and how we can decrease the amount of natural resources used.