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Grade: 2  
Recycling

Objective/Purpose: This activity introduces the students to the concept of recycling and the terms reduce, reuse, and recycle. They will be able to distinguish between an item that can be thrown away and an item that can be recycled. Additionally, the students will learn what a landfill is and why it is used. Using this information, they will then be able to reconstruct their own landfill and also understand the importance of recycling in relation to landfill use. The lesson incorporates science, social studies, and teamwork, which encompass QCC's from many areas.

Materials/Time Required:
- Trash (cereal boxes, glass, plastic, Styrofoam, anything that is trash but not too gross or hazardous to bring in)
- Picture/example of recycling arrow diagram
- Ziplock baggies (2 per student)
- Clear cups (1 per student)
- Spoons (1 per student)
- Graham crackers (2 per student)
- Fruit roll-up (1 for every 4 students)
- Vanilla pudding with chocolate chips (1 box per 15 students)
- Oreo cookies (3 per student)
- Coconut (dyed green)
- Licorice (1 per student)

Time: 2-3 hours

Background Information: This lesson is a mix of my own activities and an activity I found on the Internet. I did this activity over a two-day period. The first day I introduced the concept of trash and recycling. The second day we learned what a landfill was and why we used them and then we constructed our own landfills. The kids knew beforehand about the landfill activity and were so excited when I arrived because they knew we would be eating.

Preparation: For the trash activity, I intentionally found more "trash" that could be recycled than thrown away. I wanted the students to see that most of our trash can be reused or recycled. For the landfill activity, I had to do some background research on landfills. Prepare the pudding and dye the coconut green. Add the chocolate chips to the pudding right before class. However, a lot of my kids suggested that I shouldn't have used chocolate chips at all! Cut each fruit roll-up into 4 parts but leave on the wrapper for easier handling. Prepare the baggies by placing two graham crackers and three Oreos into a bag. Use the second baggie for the coconut. I also went ahead and made a landfill so that I would know that it worked and I would be able to show them what they would be making.
Safety Issues: Make sure not to bring in any "trash" that could be potentially harmful since the students will be handling these items. Before starting the landfill activity, all of the students need to wash their hands because they will be handling food. Also, the landfills can become pretty messy while being made. I had the students crush the graham crackers outside of the bag but directly into the cup. When it was time to crush the Oreo, I had them leave the cookies in the bag and crush them from the bag and then pour the crumbs into the cup.

Activity Outline/ Teacher Procedure:
Trash/Recycling Activity:
1. Have students think of different things that they throw in the trash.
2. Talk about and introduce the terms:
   Reduce- to use less of; preventing/ not making waste
   Reuse- to use something for a different purpose than first used for; use something over and over again.
   Recycle- to make new products/packaging from old products
3. Take out "trash" items and have students distinguish which items are trash and which are not trash (can be reused or recycled).
4. Pass out non-trash items to each student or group of students and have them think of different ways to reuse the item or products that can be made from recycling it.
5. Show students recycling arrows and encourage them to look for items with the symbol and recycle!

Landfill Activity:
1. Review concepts from trash/recycling activity and incorporate their importance by using the landfill as an example of not recycling, reusing, or reducing.
2. Ask students what happens to their trash once the trashman picks it up.
3. Draw or bring a diagram of the different layers of a landfill and explain each layer. Before reconstructing the landfill, write the corresponding snack food to each layer of the landfill.

-Licorice pipes- represent monitoring wells; Coconut, colored green- represents ground cover/ grass; Oreo crumbs- represent dirt cover; Vanilla pudding with chocolate chips- represents garbage; Fruit roll-ups- represent the plastic liner; Graham cracker crust- represents a clay liner; Bottom of cup- represents solid around

4. Pass out materials and have students reconstruct a landfill.
5. Eat and enjoy!

Assessment/Evaluation: Ask review questions about trash/recycling and landfills as students eat their models. The students will also be evaluated by having to reconstruct a landfill from what we discuss in class. The lesson also assesses the students' abilities to work together, follow directions, and discuss with peers.