

Title: Reduce With Juice

Objective: Identify ways to reduce waste

Time: 20 minutes

Materials Needed: Juice packaged in a variety of containers; scales; calculators; chart paper

Activity

Theme: Stewardship

Topic: Environmental Decision Making

Suggested Grade Level: 3-5

Indoors or Outdoors: Indoors

Directions:

1. Bring in a variety of juice containers (gallon jug, individual plastic bottles, juice boxes, juice bags, or concentrate).
2. Ask students which they would choose if they could have juice from any. Discuss why they made the choice they did. Did anyone think about the amount of packaging/garbage the juice containers had?
3. Discuss the amount of packaging for each product. For example, juice boxes have the individual box, the straw wrapper, the straw, the cardboard base that holds the boxes and the plastic wrap.
4. Try to purchase the same amount of juice (32, 64 or 128 oz.) in different types of packaging. Empty the containers prior to class.
5. Have small groups weigh the packaging for one type of container. Have students record the results on a class chart and copy into their journals.
6. Calculate the amount of packaging per ounce. Divide ounces of packaging by number of ounces of juice it contains.
7. Which packaging produces the least amount of waste? Can any of the packaging be recycled? Knowing what you do now, would you change your original choice of juice packaging? Why/why not?

Discussion Questions:

1. Each Minnesotan creates over 2,000 pounds of waste every year. What can you do to reduce the amount of waste you create?
2. What are some other products that your family purchases that can be packaged in a variety of ways? (*chips, snacks, cereal, etc.*)
3. We all make choices. Does convenience ever influence your decisions? Explain.
4. What are major influences for the decisions you make? For the decisions our school makes regarding packaging?

Science and Engineering Practices:

5. Using mathematics and computational thinking; 7. Engaging in argument from evidence; 8. Obtaining, evaluating, and communicating information.

Crosscutting Concepts:

2. Cause and effect: mechanism and explanation; 3. Scale, proportion, and quantity.

Disciplinary Core Idea:

Earth and Space Sciences: ESS3: Earth and human activity.

Background Information:

- **Conserve:** to prevent the wasteful use of resources. People can conserve resources by protecting natural places and limiting the amount of resources they use and consume.
- **Reduce:** to use less.
- **Reuse:** to put again into service without changing.
- **Recycle:** to put again into service after changing.

Additional Resources:

- *The Adventures of a Plastic Bottle* by Allison Inches
- *A Plastic Bottle's Journey* by Suzanne Slade
- *Garbage, Waste, Dumps and You* by Connie Colwell Miller
- Earth 911: Various topics on recycling - www.earth911.com
- The Green Team: Interactive Educational Program and Lesson Plans - www.thegreenteam.org

Correlates with:

Greeting - Conservation Greeting (p. 5)

Interdisciplinary Lesson - Conservation Practices at School (p. 89)