

Landfill Simulation Activity

MATERIALS NEEDED:

- Chart paper, chalkboard or overhead
- One 15 quart plastic container with lid
- Clear plastic to serve as a liner
- Soil
- Sand (to absorb moisture)
- Charcoal (to absorb odor)
- Water
- Magnifying glass (1 per student)
- Several organic (nature-made) and inorganic (man-made) materials to be buried in the landfill. Suggestions: orange and banana peels, newspaper, glossy magazine paper, cardboard, paper towels, aluminum can.

PROCEDURE:

1. Discuss landfills. What are they? Refer to the “Where Does Trash Go?” Lesson Plan.
2. Ask students what happens to waste materials in a landfill and introduce them to the term decomposition.
3. Discuss with students the disadvantages to landfills and brainstorm possible solutions to the problem of limited landfill space. Use chart paper, chalkboard or overhead to record student ideas.
4. Have students observe organic and inorganic materials under a magnifying lens and predict which materials will partially decompose and which will not. Write predictions on chart paper, chalkboard or overhead. Have students record in journals.
5. Construct a simulated landfill using the following directions:
 - a. Line container with clear plastic. Place approximately one inch of sand in the container.
 - b. Place two inches of soil on top of sand in the container and moisten with water.
 - c. Add one type of trash to container and cover with more soil. Moisten with water.
 - d. Continue alternating layers of trash and moistened soil until almost full.
 - e. Top simulated landfill with charcoal to absorb odor.
 - f. Place simulated landfill in a sunny window, moistening soil every week.
 - g. After six weeks uncover objects from each layer. Place them on a piece of cardboard and observe them with a magnifying glass. Discuss your observations.