

NAME: _____

DATE: _____

Composting Benefits

Lesson 13, Handout 3

Composter Materials:

- A piece of fruit with a seed or a peel (banana, apple, peach, orange)
- 1/2 cup of green leaves and grass cuttings
- 1/2 cup of brown leaves or straw
- 2 cups of soil
- 1 cup of newspaper or paper towels torn into small pieces, approx. 1 in. wide or less
- 1 re-useable container with top (plastic soda bottle or clear plastic container)
- A permanent marker
- Scissors
- Tape
- Spoon
- Water spray bottle
- 1 thermometer

Procedure:

1. If you are using a plastic soda bottle, measure about 7 inches from the bottom of the bottle and mark with the permanent marker. Draw a line around the bottle at the 7 in. level. Use scissors to cut around this line. Do not cut all the way around! Leave about 1-1 1/2 inches to serve as a hinge for a flip lid.
2. Open the flip lid of the container and add the ingredients in the following order:
 - 1cm of soil
 - Fruit scraps from the student's eaten fruit
 - 1cm of soil
 - Green grass/leaves
 - Brown leaves/straw
 - 1cm of soil
 - Torn up newspaper
 - Fruit scraps
 - 1cm of soil
3. Once the layers have been added, give the surface a quick spray of water. This can be done throughout the experiment as the surface becomes dry over time.
4. Insert the thermometer into each container so that the temperature can be read.
5. Seal the bottle or place the lid on and tape it so it is secure. Draw small lines on the side of the container with a marker to mark the layers of the bottle. Make a note of the initial temperature inside the bottle.
6. Over the next 3 weeks monitor the bottle. Keep daily records of the temperature and changes inside the bottle. You may even start to grow types of mold and bacteria. Be sure to make notes about changes that you see, smell, etc. After 3 weeks use the compost you created as soil for a classroom plant or in your school garden, or in your backyard at home.

INSPIRING CHANGE PROJECTS



Calculate Your Carbon Footprint

Students inspire their households to adopt changes to reduce emissions associated with their lifestyles. View the online footprint calculators listed below to create a handout that includes the questions from the calculators. Ask students to work with their parents to complete the handout and to use the information they've gathered to enter in the online calculator and record the results. Look over the "take action" calculator and ask students to think about which actions they could try. Have them write an ecological footprint pledge to take home and discuss with their parents about making changes.

Ecological footprint calculator: <http://www.earthday.net/Footprint/index.asp>

Take action calculator: http://www.earthday.net/Footprint/english/take_action.html



Pack a No Waste Lunch

Packing a lunch in reusable containers can actually be cheaper than buying packaged foods, and generates less waste. By putting on a "no-waste" lunch day, this project can inspire students and parents to creatively reduce lunchtime waste. Create a tip-sheet for parents on how to make a no-waste lunch. For example, use a lunch box with reusable containers, include a cloth napkin, don't pack plastic silverware, and use a thermos or water bottle instead of packaged drinks and soups.

Tips for a no-waste lunch: <http://www.recycleworks.org/schools/lunch.html>



Develop a School Waste Reduction Plan

Obtain for the students the school's monthly disposal fees. Lead students in conducting waste audits at different times of day for classrooms, the cafeteria, and other spaces to examine the amount and composition of the garbage. Guide students in creating a graph that charts the school's monthly garbage production/disposal over a few months. The graph can also include a pie chart illustrating the percentage of recyclable, compostable, and reuseable items that are in the trash. Ask students to develop a school waste reduction plan. Ideas include: launching salad bar programs filled with local produce from neighboring farms or school gardens and implementing a composting program. Using the resources found in the links below, create a program appropriate for your students and school resources.

Guidelines and resources for school food projects: <http://www.eecom.net/mfsp/guide.html>

Waste emissions calculator:

http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_Form.html



Start a School Recycling Program

If the school does not have one yet, start a school recycling program. Guide students in communicating and working with office and custodial staff to assess current levels of solid waste. Lead students in researching the community's local recycling resources and coordinating recycling pick-ups at the school. Discuss with students ideas for other creative recycling programs such as recycling the library's unwanted books; electronic recycling for old phones, batteries, and computer parts; and encouraging the school to purchase paper and class equipment made from environmentally friendly recycled materials. Work with students to develop and implement a school outreach campaign to launch the program. Contact the San Luis Obispo County Integrated Waste Management Authority for more information.



Ask Local Government to Adopt Best Practices in Waste Management

Across the country, communities have a wide range of recycling, compost, and other waste reduction strategies. Students can take a role in pushing their community to adopt better waste management strategies. Investigate what your community is doing, what other communities have done, and prepare a presentation to your local city council on what they might change. Contact the San Luis Obispo County Integrated Waste Management Authority for more information.