



Title: Sort the Compost Bin Written by GEF Staff

Grade: PreK -2

Subject: Science, Social Studies

Time: 30 minutes

Standards:

Science Standard 12: Understand the nature of scientific inquiry.

- Benchmark # 2: Record information collected about the physical world (e.g., drawings, pictures simple data charts).
- Benchmark # 7: Understand simple cause-and-effect relationships based on previous experience.

Geography Standard 14: Understand how human actions modify the physical environment.

- Benchmark # 1: Know ways in which people depend on the physical environment (e.g., to grow food).

Geography Standard 16: Understand the changes that occur in the meaning, use, distribution and importance of resources.

- Benchmark # 1: Know the role that resources play in our daily lives (e.g., soils used for growing food).

Objectives:

- Explain what compost is and the value of using compost to grow crops.
- Differentiate between “green compost” materials and “brown compost” materials and explain what each brings to the composting process.
- Sort and classify objects as materials that can be composted and cannot be composted.

Materials:

- Composting Chart Sorting Worksheet (included below)

Overview: What is compost? It is simply the decayed remains of organic matter that has rotted into a natural fertilizer. To build a compost heap, students will need both brown and green materials. The brown materials are high in the element carbon and include dead, dried plant parts like leaves and pine needles. Green materials are high in the element nitrogen and include grass clippings, kitchen vegetable scraps, fruit remains, weeds and other plant matter. Not everything can go into the compost heap. Students should NOT use meat, milk products, bones, processed foods, oils and animal droppings. Also do not use diseased garden plants as they can spread disease back into the garden later when you use the compost.

Kid's Speak: Compost is leaves and other organic material broken down into very small pieces of soil.

Eco-Fact: Two thirds of our trash is biodegradable and can be composted.

Procedure:

Before Sorting Compost Bin:

- Bring a sample of compost to class to show to the students. Explain to students what compost is, what it is used for, how it is made. Tell students the ingredients that can be used to make healthy compost and what should never be composted. Have some or all of the following materials available to show to the students: left over pork chops, cheese, dried leaves, bark, chicken bones, pine needles, grass clippings, apple core, pea pods, banana peels, and dandelions, litter box contents, cooking oils, newspaper, brown paper towels and corn husks. As you show each item to the class do a talk aloud, sorting the ingredients into three categories: green compost materials, brown compost materials and materials that should never be used in compost.
- Explain the difference between "green" and "brown" composting materials, referring to the items previously sorted, and what each type of material adds to compost.



Sorting the Compost Bin:

- Distribute the Composting Chart that has been provided. Review the pictures at the bottom of the page with the students so they recognize each one.
- Have students color the pictures, cut them out and sort them into the proper categories.
- Have students paste them onto the chart under the correct heading.

After Sorting the Compost Bin:

- Have students make suggestions of other things that could be added to the compost bin. Record their responses on a chart similar to the worksheet. Ask student in which column (e.g., Brown, Green or Don't Use) you should record their suggestion.

Adaptations: Younger children can color pictures of already sorted objects.

Extensions:

- Collect materials for the compost heap. - Visit the other composting lessons on this GEF site.
- For tips on dietary guidelines and healthy eating habits visit the USDA Food Pyramid at <http://www.mypyramid.gov/index.html>

All lessons listed on the GEF website have been aligned with the McREL Compendium of Standards and Benchmarks for K-12 Education. GEF curriculum has been developed in accordance with the McREL standards in order to reflect nationwide guidelines for learning, teaching, and assessment, and to provide continuity in the integrity of GEF curricular content from state to state. The decision to utilize McREL's standards was based upon their rigorous and extensive research, as well as their review of standards documents from a variety of professional subject matter organizations in fourteen content areas. Their result is a comprehensive database that represents what many educational institutions and departments believe to be the best standards research accomplished to date. To access the McREL standards database, or for additional information regarding the supporting documentation used in its development, please visit <http://www.mcrel.org>.