



Recycling Lesson Plan- Waste Not, Want Not

Driving question- How does a compost pile reduce waste?

Lesson- Students may use the internet, visit libraries and greenhouses, and interview farmers, neighbors, or family members with gardening experiences to gain information about composting. As part of this lesson, students will:

- Compost materials to observe and record what happens in the process;
- Experiment to determine what types of materials biodegrade;
- Research why the compost needs air and water;
- Investigate how to control compost odors;
- Consider why they should bother with composting; and
- Plan what might be done with the compost from their experiments.

Following the research, student teams should consider how composting might be done at home or on a larger scale for a school or community and what might be done with the compost from large scale composting operations. They should prepare to present a composting plan recommendation to the principal, school board, or city council. Teachers may contact these individuals and arrange for them to attend the students' presentations.

Informational Text- As part of their presentations, students should be prepared with an, "If you want to learn more..." recommended reading for the principals or members of the school board or city council, which includes the book or article and the name of the newspaper or magazine, author, a quick summary, and the ISBN.





Additional Information

For more than thirty years, the U.S. Environmental Protection Agency (EPA) has been collecting data on the generation and disposal of waste in the United States. Waste reduction and recycling programs across the country are measured and used to determine the amount of waste generated. In 2013, Americans generated about 254 million tons of trash and recycled and composted over 87 million tons of material, which is equivalent to a recycling rate of 34.3 percent. On average of the 4.4 pounds of solid waste generated by every person each day, we recycle or compost about 1.51 pounds of that waste.

Recycling is the process of turning used waste and materials into new products. This prevents potentially useful materials from being wasted, as well as reduces energy use and pollution.

The energy required to convert raw materials such as minerals, oil, and trees into metals, plastics, and paper is far greater than the amount of energy required to collect and recycle our paper, bottles, and cans into new products.

A wide variety of different materials can be recycled, including paper, plastic, glass, metal, textiles and electronic equipment. Historical evidence shows that humans have been recycling various materials for thousands of years.

Recycling Resources

Find recyclers at earth911.com/ or www.recyclingcenters.org/.

West Virginia Solid Waste Management Board or Solid Waste Authority Contact Information at <http://www.state.wv.us/swmb/>.

<http://www.terracycle.com/en-US/> Recycling systems for previously non-recyclable or hard-to-recycle waste.

<http://www.facingthefuture.org/> A nonprofit leader whose mission is to create tools for educators that equip and motivate students to develop critical thinking skills, build global awareness and engage in positive solutions for a sustainable future.

<http://www.epa.gov/recycle/> Learn how reducing, reusing, and recycling can help you, your community, and the environment by saving money, energy, and natural resources.

https://www.epa.gov/sites/production/files/2015-09/documents/2013_advncng_smm_rpt.pdf Characterization fact sheet and data tables provide the most recent available data on annual US waste generation, recycling, and disposal, as well as the benefits of recycling.

<http://www.paperrecycles.org/statistics/paper-paperboard-recovery> American Forest & Paper Association recovery, 2015.

<https://plastics.americanchemistry.com/Education-Resources/Publications/2014-National-Post-Consumer-Plastics-Bottle-Recycling-Report.pdf> 2014 study to quantify the amount of high density polyethylene (HDPE) and polypropylene (PP) bottles collected and the rate of recycling of those bottles.

<http://www.cancentral.com/curriculumSelect.cfm> Can Manufacturers Institute's educational curriculum.

<http://www.jason.org/partner/isri> School curriculum regarding scrap metal recycling.