Recycling Coalition of WV, Inc.

Recycling Lesson Plan- One Man's Trash is Another Man's Treasure

Driving question- What does waste disposal cost anyway?

Lesson - Following the research from the *Don't Waste the Moment* lesson, student teams can research the cost of waste disposal and continue with interviewing the cafeteria workers, janitors, teachers, and the principal. Their questions may extend to other members of the school system and community so they may get answers to questions such as:

- How often is trash removed from cafeteria?
- How often is trash removed from school?
- What does trash service cost for the school per month?
- What are the transportation or disposal charges for trash?
- How might we reduce our impact on the amount of waste generated?
- Could we reduce the cost of waste removal and save money for other purposes?

Information from each group may be compiled on charts. If students have experience working with spreadsheets, they may consider using Microsoft Office Excel or Google forms; tutorials are available online. TechSteps also provides instruction for Excel. Graphs may be created to illustrate results of waste disposed.

Following their research, student teams should present their findings about the cost of waste removal for the school. They should propose a solution to reduce the amount of solid waste in the garbage. If their proposals show a saving of school funds, the students may also propose what could be done with the money.

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

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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.