

EVERY DAY IS EARTH DAY

Learning Objectives: Students will

1. Use research skills to find information electronically and in print
2. Gain understanding of the recycling process and its importance
3. Create a visual product using technology
4. Use creative thinking to solve problems

TEKS SS 3.17, 3.18, 4.21, 4.22, 5.24, 5.25, Sci 3.1, 4.1, 5.1

Materials Needed: computer access, <http://www.epa.gov/recyclecity/>

Vocabulary: post-consumer content, materials recovery facility

Teaching Strategies:



1. Begin class discussion by asking students to identify the recycle symbol and what the arrows represent. (Manufacturing, consumer use, recycling back to manufacturer) Ask students to name things they recycle at home. Follow up with questions about what can be made of recycled materials, including paper products that are made from recycled paper, not trees, and aluminum cans made from aluminum cans. Manufacturers can make an XL t-shirt out of 5 plastic soda bottles.
http://www.epa.gov/osw/education/quest/pdfs/sections/u2_chap2.pdf
2. See Recycling Innovation, attached, for more information.
3. Go to <http://www.epa.gov/recyclecity> for a good kids game and activities about recycling. Lead a class discussion on what recycling can be done in each segment of "recycle city."
4. Divide class into groups of 3 or 4. Assign each group a product to research, including paper, glass, plastic, cans, tires, steel, and electronics (this subject will be harder).
5. Each group will discover facts about recycling their particular product. Questions to be answered include: How hard it is to recycle this product? What can be made from this recycled product? Why is it important to recycle this product?
6. Each group will create an electronic poster using www.edu.glogster.com, displaying the facts they learned. Students

should also include a new slogan encouraging the recycling of their product.

7. (Optional) As a follow-up, encourage students to bring recyclable materials to class, in order to make a game of some sort. It can be a board game, a team sport, a brainteaser, or others. Students may form their own teams in order to make their game, which will be shared and played by others when everyone has completed their game.

Extension for G/T

Students can dig more deeply into the growing problem of the recycling of electronic products. What can be made from parts of old computers, cell phones, answering machines, printers, etc.? Students could also respond to the question, "Should recycling be required by law?"

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Recycling Innovation: Landfill Golf Courses

What if you could recycle an entire [landfill](#), filled with millions of tons of garbage? That's been accomplished in many places, where the landfill is capped with earth, planted with vegetation and turned into a golf course. Mountain Gate Country Club near Los Angeles is just one example [source: [Brownfield Golf](#)].

Recycling Innovation: World Trade Center Steel

While much of the steel debris from the terrorist attacks on the World Trade Center was shipped to [China](#) -- a market hungry for scrap metal -- some pieces were recycled in the United States in symbolic ways. Several tons of Trade Center steel were recycled and used to make the bow of the [U.S. Navy](#) amphibious assault ship, USS New York [source: [Snopes.com](#)]. Small pieces of steel from the World Trade Center were imprinted with American flags and used in the construction of [NASA's](#) Spirit and Opportunity rovers on [Mars](#) [source: [NY Times](#)].

Recycling Innovation: Recycling Rewards

Some towns charge residents fines if they don't recycle. [Philadelphia](#) has a pilot program with a company called RecycleBank that takes the opposite approach. Residents use special recycling totes with microchips to measure the amount of materials recycled by each household. RecycleBank then tracks their recycling and awards them credits redeemed for discount coupons, saving the household hundreds of dollars per year if their recycling totals are high enough. Other cities are considering trying the program as well, with the goal of increasing participation rates [source: [Buffalo News](#)].

Recycling Innovation: Old Tires into Football Fields

The millions of [-automobiles](#) on the road create numerous waste management problems, not the least of which comes from the tires. Left in a dump, they can catch [fire](#) or break down and leach toxic compounds into soil and groundwater. However, there are several new uses for old tires. Tires are shredded and filtered of non-rubber components. Rubber Bark uses the shredded tires to create landscaping mulch [source: [Rubber Bark](#)]. Even more surprising, some companies chop tires into crumbs and create a sort of fake soil used on the artificial turf of [football](#) and [soccer](#) fields. One field can use between 20,000 and 40,000 scrap tires [source: [American Recycler](#)]. The rubber crumbs fill in between the artificial grass blades, providing stability to the surface and giving a softer, more natural feel.