

Appendix M: Factoids

Below are environmental factoids to help you measure the impacts of your school's waste prevention and recycling program. You can also refer to the WASTE Reduction Model (WARM) Calculator on the EPA Web site http://epa.gov/climatechange/wycd/waste/calculators/Warm_home.html to convert waste reduction values into greenhouse gas emission reductions and energy savings. Be sure to inform students and staff members of the results of their efforts!

Aluminum

- Recycling aluminum uses less than five percent of the energy used to make the original product.
- Recycling one aluminum beverage can saves enough energy to run a 100-watt bulb for 20 hours, a computer for three hours, or a TV for two hours.
- Recycling 10 tons of aluminum saves as much greenhouse gas emissions as preserving more than 1.1 acres of forest from deforestation.

Plastic

- Producing new plastic from recycled material uses only two-thirds of the energy required to manufacture it from raw materials.
- Plastics require 100 to 400 years to break down in a landfill.
- Five 2-liter recycled PET bottles produce enough fiberfill to make a ski jacket.
- The energy saved by recycling one plastic bottle will power a computer for 25 minutes.
- Recycling 10 tons of PET plastic saves as much greenhouse gas emissions as removing more than three cars from the road for one year.

Glass

- Producing glass from virgin materials requires 30 percent more energy than producing it from crushed, used glass.
- The energy saved from recycling one glass bottle will operate a 100-watt light bulb for four hours.
- It takes approximately one million years for a glass bottle to break down in a landfill.
- Recycling 10 tons of glass saves as much greenhouse gas emissions as preventing the use of more than eight barrels of crude oil.

Steel

- Tin cans contain 99 percent steel.
- Recycling steel and tin cans saves between 60 and 74 percent of the energy used to produce them from raw materials.
- According to the Steel Recycling Institute, steel recycling in the United States saves the energy equivalent to power about one-fifth of American households for one year.
- One ton of recycled steel saves the energy equivalent of 3.6 barrels of oil and 1.49 tons of iron ore over the production of new steel.
- By recycling steel, the steel industry saves enough energy in one year to electrically power 18 million homes for one year.
- Recycling 10 tons of steel saves as much greenhouse gas emissions as growing 470 tree seedlings for 10 years.

Paper

- Producing recycled paper requires about 60 percent of the energy used to make paper from virgin wood pulp.
- Manufacturing one ton of office and computer paper with recycled paper stock can save between 3,000 and 4,000 kilowatt hours over the same ton of paper made with virgin wood products.
- Preventing one ton of paper waste saves between 15 and 17 mature trees.
- By recycling one ton of paper, we save enough energy to heat an average home for six months.
- The greenhouse gas emission reductions from recycling 10 tons of mixed paper are comparable to preventing the use of 94 barrels of crude oil.

Sources: <www.eia.doe.gov/kids/energyfacts/saving/recycling/solidwaste/paperandglass.html>, <science.enotes.com/science-fact-finder/environment>, <www.clearwater-fl.com/gov/depts/solid_waste/docs_pub/facts.asp>