



# Recycling and Waste Reduction

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## Background

### Introduction

In 2007, Americans used and disposed 96,751 tons of paper.<sup>1</sup> The good news is that 56.1 percent of that paper (54.3 million tons) was recycled.<sup>2</sup> When you recycle old notebooks and school papers, they are used to make new items, rather than simply sitting in a landfill. And paper is not the only resource that can be recycled. Plastic, aluminum, steel, and glass can be reused as well.

### Waste Reduction and Recycling

In 2006, Americans recycled almost 82 million tons of materials, or 32.5 percent of their trash<sup>3</sup>. In 2006, Americans generated about 251 million tons of trash. This means the average American generates 4.6 pounds of waste per day, but only recycles roughly one-third, or 1.5 pounds of it.<sup>4</sup>

Schools are a great source of recyclable materials: just think about the amount of paper that students and teachers use on a daily basis. Schools can recycle more than just paper and cans. Many vendors and office supply companies will collect your school's used toner cartridges and cell phones in exchange for cash or rewards for your school. Collecting these items is an easy way to earn money for your school.



Source: The Earth Day Network, Sullivan Elementary

But it should not stop at recycling – you can reduce and reuse your materials before you even send them off for recycling. But since schools will not be able to eliminate all of their disposable materials, it is important to recognize how much could be improved with better recycling.

### Reasons for a Recycling Program

For every ton of paper recycled, 3.3 cubic yards of space is saved in landfills.<sup>5</sup> Furthermore, recycling 82 million tons of materials – the amount American citizens recycled in 2006 – is the same as reducing 49.7 million metric tons of carbon emissions, or in other words, taking 39.4 passenger cars off the road.<sup>6</sup>

One unique material that can be recycled, Aluminum, can be recycled forever. Recycling one aluminum can takes 95 percent less energy than making a new one from virgin materials and therefore is exceptionally the most cost-effective and preferred method environmentally.<sup>7</sup> Recycling reduces the need to use “virgin” raw materials. Recycling any material though, results in less pollution and greenhouse gasses, conservation of natural resources and savings in energy consumption.

Reduced use of energy means a cleaner environment where students live, learn, and play. Recycling programs at school will decrease the amount of generated waste, creating fewer trash collections and ultimately resulting in potential financial savings at your school. Even better, there are some municipality vendors that are willing to buy your school’s recyclable materials, putting money straight back into your school’s budget and providing those needed funds for an exciting and educational field trip back to your city’s dump.

### **Before You Recycle**

The three steps to waste reduction are to reduce, reuse, and recycle. What does this mean exactly? Well, recycling is a good step and in general, uses far less energy than making an entirely new product – but it is not perfect. Not all materials are recyclable, not all regions have extensive recycling programs, and even when materials do get recycled, some of it still ends up in landfills.

This is why *reducing* is the best step you can take to make less waste. Does your school use materials that it does not even need, or use disposable items when they could use durable replacements? Some visuals in class, for instance, could be shared by students, projected from a computer instead of being copied, or viewed online if all students have access to the internet at home. Many assignments could be emailed instead of printed out, and some textbooks and workbooks could be replaced by online handouts and/or printing off limited copies of pages.

Cafeterias are another source of waste. Does your school use Styrofoam plates or cups? Almost no places even recycle Styrofoam, so it is best to do away with it all together. Furthermore, reducing consumption is a surefire way to save money. Along with reducing, is *reusing* containers, paper, and other products and materials. Your school can save itself money and help the environment if it reuses materials for art projects, for instance.

### **Basic Recycling**

No matter what the situation, in today’s society we are going to generate some trash that can not be reused. But by eliminating our use of products such as Styrofoam, for instance, and using only recyclable materials, we can have a significant positive impact on our environment. Many materials are recyclable in certain places only, but the most commonly recycled materials are glass, plastic, paper, and aluminum. All four of these materials should be recyclable by your school.

### **Earth Day Network Resources**

- [Action Plan](#)
- [Lesson Plan](#)

### **Additional Resources**

- [The School Recycling Club](#)
- [EPA Recycling Website](#)

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<sup>1</sup> Paper Industry Association Council. (2008). *2007 Recovered Paper Annual Statistics Highlights*. Retrieved 17 June 2008, from <http://stats.paperrecycles.org/>

<sup>2</sup> Ibid.

<sup>3</sup> Environmental Protection Agency (2006). *Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2006*. Retrieved 19 June 2008, from <http://www.epa.gov/epaoswer/non-hw/muncpl/pubs/msw06.pdf>

<sup>4</sup> Ibid.

<sup>5</sup> Carnegie Mellon. *Why Recycle Paper?* Retrieved 18 June 2008, from <http://www.cmu.edu/greenpractices/recycling/paper.html>.

<sup>6</sup> Ibid

<sup>7</sup> Novelis (2005) *Recycling Facts and Figures*. Retrieved 19 June 2008, from <http://www.recycle.novelis.com/Recycle/EN/Communities/Library/Recycling+Facts+and+Figures/>