

# Aluminum Can Challenge

## Proportions you need for the challenge

There are 365 days in one year.

There are 7 days in one week, and 24 hours in one day.

There are 52 weeks in one year.

There are 12 months in one year.

There are 60 minutes in one hour.

There are 16 cups in one gallon.

Recycling one aluminum can saves the energy equivalent of one cup of gasoline.

Recycling one aluminum can saves enough energy to light a 100-watt light bulb for 210 minutes.

Each person generates about 5 pounds of garbage per day.

Each pound of aluminum makes 32 cans.

## Challenges

- a. A fourth grade class decides to collect cans for the Great Aluminum Can Round Up. How many cans will they need to collect to save the equivalent energy of 10 gallons of gasoline?
- b. If each student in your class recycles one aluminum can each day, how much 'gasoline energy' would the class save in one week? One year? How many gallons of gasoline would they have saved?
- c. Suppose your class decides to recycle cans for a recycling contest. You set a class goal of 80 cans for each week. How much gasoline energy would that save each week?
- d. Recycling 50 cans would save enough energy to light a room with a 100-watt bulb for how many hours?
- e. If you recycle one aluminum can each day for one year, you would save enough energy to light a room with a 100-watt bulb for how many minutes?
- f. Given the number of soda cans you and your family use each week, how many minutes could you light the lightbulb in one year if they were recycled?

- g. At the end of six weeks, the fourth grade class collected 6400 cans for recycling. How many pounds of aluminum did they collect?
- h. If the recycling company pays \$1.25 per pound of aluminum, how much money can the class earn for 6400 cans?
- i. If a car can go 30 miles on one gallon of gas, how far can it go on the amount of gasoline saved by recycling 8 aluminum cans each month for one year?
- j. How many miles could your family's car go on the number of aluminum cans you use each year?

## Other Facts about Recycling

**Paper:** If all morning newspapers in the US were recycled for 1 day, 41,000 trees would be saved, and 6 million tons of waste would never end up in landfills.



**Plastic:** 1200 soft drink or salad dressing containers could be recycled into carpeting for an averaged sized living room.

**Glass:** Recycling one glass bottle saves enough electricity to light a 100-watt bulb for four hours.

**Aluminum:** In three months, Americans throw away enough aluminum to rebuild every airplane in the commercial air fleet.

**Steel:** Americans throw away more steel and iron every year than domestic automakers use in the same time.

The facts listed above were taken from the following websites: [www.hcdoes.org](http://www.hcdoes.org) and [www.ohiodnr.com](http://www.ohiodnr.com)