



CLIMATE CHANGE SCORECARD



NAME: _____ DATE: _____

There are many things we can all do to help slow global climate change and keep our earth healthy. We help each time we make a choice that results in using less fossil fuels for energy, heating and transportation. Below is a list of ways we can reduce our energy use and help counteract pollution. Keep track of your actions for a week. Give yourself a point each time you take an action. See how many points you and your classmates can accumulate. The more points, the more you are doing to stop global warming! Can you think of other ways to save energy, reduce pollution or remove carbon dioxide from the atmosphere? Add them to the list and get points for each one you do!

| These activities reduce greenhouse gas emissions by using less fuel for transportation. Can you think of others? Add them to the list! | Number of Times During the Week | Grand Total |
|---|--|--------------------|
| Take the bus to school | | |
| Walk or bike to school | | |
| Carpool | | |
| Take public transportation instead of driving | | |
| Don't idle a vehicle engine for more than one minute when waiting for riders | | |
| Eat locally grown food | | |
| | | |
| | | |
| These activities reduce greenhouse gas emissions by saving energy. Can you think of others? Add them to the list! | | |
| Explore nature or play outdoors (using only human energy) | | |
| Turn out lights when leaving a room | | |
| Turn off appliances and power-strips when not in use | | |
| Reduce your screen time (TV, videogames, computer games, internet surfing) | | |
| Encourage your family to save energy and show them how | | |
| Change incandescent light bulbs to compact fluorescents | | |
| Cover pots and pans when cooking | | |
| Use less hot water, for instance, by taking shorter showers | | |
| Ask your family to schedule a home energy audit from your energy provider | | |
| Recycle paper, cardboard, plastics, glass and metals | | |
| Recycle or reuse plastic shopping bags | | |
| Use refillable containers for lunch and snacks, when you bring them | | |
| Use a refillable bottle or thermos for water or other drinks | | |
| Research solar and/or wind power potential for your home or school | | |
| | | |
| | | |
| These activities help remove carbon dioxide from the atmosphere. Can you think of others? Add them to the list! | | |
| Plant a tree (select appropriate tree for your location, plan for mature size of tree, plant at the correct depth and water weekly until established) | | |
| Plant a garden | | |
| | | |
| | | |
| These activities help store carbon in the soil. Can you think of others? Add them to the list! | | |
| Make a compost pile | | |
| Use leaves as mulch | | |
| Leave grass clippings on the lawn | | |
| | | |
| | | |
| | TOTAL | |

Add up your total points for the week. **Congratulations for making a difference!** Try to continue these activities after your class project ends and to keep adding new ones to your list. Share what you have learned with others. On the back are examples of the impacts your actions can have.
Other resources to check out and share: www.fueleconomy.gov - look up fuel efficiency for different vehicle makes and models; www.epa.gov/climatechange - learn more about climate change, with a special section for kids; <http://www.masscec.com/> - learn about renewable energy resources available to Massachusetts residents.

Here are some examples of how our actions can affect the amount of carbon dioxide in the atmosphere. You may use the information below to estimate how much carbon dioxide you and your classmates save.

Transportation

You avoid car trips when you walk, ride your bike, carpool, ride the bus or take the subway. For a car that averages 20 miles per gallon, you save about a pound of carbon dioxide for each mile not driven. Avoiding just 10 miles of driving per week can save 500 pounds of carbon dioxide each year.

Idling in a vehicle wastes fuel and contributes about 20 pounds of carbon dioxide for each gallon of gasoline used. Idling for more than 10 seconds uses more fuel than restarting your engine.

Energy

The more you recycle, the more energy and carbon dioxide you save. Recycling just half of your household waste can save 2,400 pounds of carbon dioxide each year.

When you use refillable containers and avoid products with excessive packaging, you can reduce the amount of trash you need to recycle or throw away by up to 10 percent. This can save 1,200 pounds of carbon dioxide each year.

A home energy audit provides suggestions on improving insulation and energy efficiency that can typically save 1,000 pounds of carbon dioxide each year.

Using less hot water by installing a low-flow showerhead and washing your clothes in cold or warm water instead of hot can save 850 pounds of carbon dioxide each year.

Replacing a regular light bulb with a compact fluorescent bulb can save 300 pounds of carbon dioxide each year.

Carbon Sequestration

One tree can sequester thousands of pounds of carbon dioxide over its lifetime. Trees use carbon dioxide from the atmosphere to grow. Carbon dioxide is transformed during photosynthesis into carbohydrates and other building blocks of leaves, branches, bark and trunk. All green plants take carbon dioxide out of the atmosphere during photosynthesis.

Composting leaves, grass clippings and kitchen scraps turns some of the carbon in those materials into compost. Adding compost to the soil can store the carbon it contains for many years.

Fun facts you can use to calculate your family's carbon dioxide savings

Each gallon of gasoline burned produces about 20 pounds of carbon dioxide (Source: Energy Information Administration, <http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11>). Visit www.fueleconomy.gov to look up the fuel efficiency of your family's vehicle(s). Then you can calculate how much carbon dioxide your family uses for each mile driven and saves for each mile not driven.

For the amount of carbon dioxide produced by burning various fuels, visit the Energy Information Administration, <http://www.eia.gov/tools/faqs/faq.cfm?id=73&t=11>. With this information, you can calculate the carbon dioxide saved when your family conserves heating fuel.

Each kilowatt-hour of electricity produced by burning fossil fuels (gas, coal, oil) and delivered to your home produces about 1.5 pounds of carbon dioxide (Source: EIA, <http://www.eia.gov/tools/faqs/faq.cfm?id=74&t=11>). You can calculate the carbon dioxide saved from conservation measures taken or more energy-efficient appliances your family chooses.

Renewable energies such as solar, wind, hydro and geothermal power do not produce any carbon dioxide to generate electricity. Using these methods to replace some or all of our traditional energy sources are the best energy choices we can make.

Additional sources: MassDEP, www.mass.gov/dep/air/climate/index.htm; EPA, www.epa.gov/climatechange; An Inconvenient Truth, www.climatecrisis.net