What's Your Carbon Footprint?

Name: _____

Carbon dioxide (CO_2) is a naturally occurring greenhouse gas which helps trap the suns heat on earth, keeping our planet a comfortable temperature. Our use of fossil fuels for energy releases excess CO_2 and is causing climate change.

You can calculate your personal "carbon footprint", or the amount of CO_2 emissions that you and your family create through daily life: heating your home, using electricity, and by driving. You can also find ways to reduce your carbon footprint on back of this page.

ENERGY USE AT HOME

Heating Fuel: select the type of fuel used in your home and fill in below

Emission factors

Propane: 12.8 lb CO_2/gal,   #2 Heating Oil: 22.4 lb CO_2/gal,   Natural Gas: 12.6 lb CO_2/therm[1] Wood: 6,710 lb CO_2/cord   Wood Pellet: 4421 lb CO_2/ton *while burning wood does release CO_2 into the air it is CO_2 that is already part of the carbon cycle, as opposed to fossil fuels, which introduce CO_2 into the cycle from deep underground.

[_____] × _____ × _____ × 12 = _____

fuel name | gallons or therms or cords used monthly | emission factor for fuel type used | months/year | **pounds CO_2 /year**

Electricity Use: check your homes last electric bill for the Kilowatt hours (kWh)

_____ × $\underline{0.9 \text{ lb } CO_2/kWh}$ × 12 = _____

kWh used/month (see electric bill) | Avg. New England Emission factor | months/year | **pounds CO_2/year**

TRANSPORTATION ENERGY

gasoline

_____ ÷ _____ × $\underline{19.5 \text{ lb } CO2/gal}$ × 12 = _____

Miles driven/ month | miles/gal (mpg) | Gasoline emission factor | | **pounds CO_2/year**

diesel

_____ ÷ _____ × $\underline{22.4 \text{ lb } CO2/gal}$ × 12 = _____

Miles driven/ month | miles/gal (mpg) | Diesel emission factor | | **pounds CO_2/year**

To determine mpg use the equation below or check online:
(miles traveled ÷ gallons used = mpg) , http://www.fueleconomy.gov/feg/sbs.htm

TOTAL HOUSEHOLD CARBON FOOTPRINT: _____

pounds CO_2/year

REDUCING YOUR FOOTPRINT

Carbon footprints can be reduced significantly by making small changes in the way we live our lives. These changes add up, and do make a difference! If everyone reduces their emissions by 2% every year, by 2050 our emissions will be down 80%!   Here's how…

Determine 2% of your total household carbon footprint from the first page.

Household Carbon Footprint (HCF)	X .02 = 2% of your HCF
_____Pounds CO_2/year	_____(2% this is your goal)

◆ Below are examples of carbon *reducing actions*, what strategies might work for you? Place a check mark next to the actions your family could or would commit to do.

√	Carbon Reducing Action	Carbon Savings
	Cut your shower time 3 minutes every day	715 pounds of CO_2/year[3]
	Hang your clothes to dry in warm weather	700 pounds of CO_2/year[2]
	Cut 10 miles of driving each week	2,395 pounds CO_2/year[3]
	Cut 10 minutes of idling time each day	1,612 pounds CO_2/year[3]
	Replace 2-60 watt light bulbs with CFLs	165 pounds of CO_2/year[3]
	Turn Off/Unplug Electric Appliances:	
	Television (2.5 hours less each day)	100 pounds CO_2/year
	2 – 60 watt lights (2 hours less each day)	80 pounds CO_2/year
	Fan (8 hours less each day)	132 pounds CO_2/year
	Computer/Monitor (1 hour less each day)	37.7 pounds CO_2/year

◆ To calculate the carbon released from home appliances - read the *watt rating* on the UL nameplate and calculate the potential carbon emissions with the equation below.

(Wattage) ÷ (1000 kW/W) X (hours used/year) X (.9 lb CO_2/kWh) = pounds of CO_2/year

Add up the carbon savings you've chosen to reduce your carbon footprint………

TOTAL REDUCTION: _____   pounds CO_2 reduced/year

Is this equal to your goal of 2% of your total household carbon footprint?

Would you be able and willing to make these changes?

1) http://www.eia.doe.gov/oiaf/1605/coefficients.html
2) http://www.climatecrisis.net/takeaction/whatyoucando/
3) Maine DEP Air Quality Bureau