CO$_2$ Emissions Assessment Phase 2

1. Continue to track your identified carbon emission source (driving, electricity, trash production).
   a. Set a carbon emission reduction goal and be specific.
      Ex: I plan to reduce my carbon emissions from driving by ¼.

   b. What is your plan for achieving this goal?
      Ex: I plan to carpool to school twice a week and ride my bike to nearby locations.

2. Measure daily carbon emissions for one week (same category as pre-activity):

		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Total
Driving	Miles Driven								
Electricity	Loads of Laundry (by the household)								
Trash Production	Number of Single-Use Water Bottles Disposed of in Recycling Bin								
	Number of Single-Use Water Bottles Disposed of in Trash Can								

Conversions

Driving:
(look up the make and model of your car) Miles/ gallon
19.6 lbs CO$_2$/ gallon

Electricity (laundry):
1.3 lbs CO$_2$/ load washed on cold
1.5 lbs CO$_2$/ load washed on hot
3.8 lbs CO$_2$/ load dried in dryer

Trash Production (disposable water bottles):
0.13 lbs CO$_2$/ bottle recycled
0.18 lbs CO$_2$/ bottle of water thrown in trash

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3. Calculate your total carbon emissions for the week.
   Ex: I drove 100 miles in one week. My car's gas mileage is 30 miles/gallon.
   100 miles x $(\frac{1\ gallon}{30\ miles})$ x $(\frac{19.6\ lbs\ CO_2}{1\ gallon})$= 65.3 lbs CO$_2$

   Ex: I washed 2 loads of laundry in hot water and 1 load on cold. I dried all 3 loads of laundry in the dryer.
   (2 loads x 1.5lbs CO$_2$) + (1 load x 1.3lbs CO$_2$) + (3 loads x 3.8lbs CO$_2$)= 15.7 lbs CO$_2$

   Ex: I disposed of 10 bottles in the recycling bin and 6 bottles in the trash can
   (10 bottles in recycling x 0.13lbs CO$_2$) + (6 bottles in trash x 0.18lbs CO$_2$)= 2.38 lbs CO$_2$

4. Calculate your percent change in carbon emissions.
   Ex: I emitted 91.5 lbs CO$_2$ in week 1 and 65.3 lbs CO$_2$ in week 2.
   91.5 lbs CO$_2$ - 65.3 lbs CO$_2$= 26.2 lbs CO$_2$
   $\left(\frac{26.2}{91.5}\right)$ x 100% = 28.6%
   My carbon emissions decreased by 26.2 lbs CO$_2$, which is a 28.6% reduction.

5. Reflect on your experience.
   a. Was it difficult or easy for you to achieve your goal? Do you feel like this is a habit you will continue to incorporate into your life? Why or why not?

b. What did you learn during this challenge? After this experience, what can you teach other people?

6. As a class, calculate your total carbon emission savings.
   (Class total lbs CO_2 from week 1 – class total lbs CO_2 from week 2)

What does this mean?

100 pounds of CO_2 emission savings is equivalent to…

- Driving 109 miles
- Recycling 28 pounds of waste rather than sending it to the landfill
- Using 1.9 propane cylinders for home barbeques
- Burning 48.4 pounds of coal

200 pounds of CO_2 emission savings is equivalent to…

- Driving 217 miles
- Recycling 58 pounds of waste rather than sending it to the landfill
- Using 3.7 propane cylinders for home barbeques
- Burning 96.8 pounds of coal

300 pounds of CO_2 emission savings is equivalent to…

- Driving 326 miles
- Recycling 86 pounds of waste rather than sending it to the landfill
- Using 5.6 propane cylinders for home barbeques
- Burning 145 pounds of coal

Sources for conversions and facts: EPA.org, wastemanagement.com, energy.gov