Weather & Atmosphere, Lesson 6:
Global Climate Change – Carbon Footprint Worksheet

Instructions
Your “Carbon Footprint” is a calculation that tells you how much carbon dioxide you produce. Since carbon dioxide is a greenhouse gas, this worksheet can help you see how you contribute to global warming.

Family Survey
Answer each question for a yearly total (multiply a monthly total by 12).

1. Number of miles driven per year _________ X (multiplied by) the vehicle’s average gas mileage _____ = _____ gallons of gasoline used.

(Do this for each vehicle your family owns)

     ___________ X _________ = ___________
     ___________ X _________ = ___________
     ___________ X _________ = ___________
     ___________ X _________ = ___________
Total ___________

2. Number of miles of air travel for your family ________________ .

3. Average number of miles your family travels by bus/other mass transit ____________ .

4. Kilowatt-hours of electricity used ________________ .
   (Look at your utility bill to find out a monthly amount and multiply by 12.)

5. Therms of natural gas used ________________ .
   (Look at your utility bill to find out a monthly amount and multiply by 12.)

6. Gallons of propane or bottled gas used ________________ .

7. Other sources of energy your family uses?
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

8. Total number of people living in your household _______.

**Your “Footprint” on the Global Environment – The Greenhouse Effect**

Use the information you gathered in your Family Survey to calculate how much CO₂ (Carbon Dioxide) you generate per year. Carbon Dioxide is one of the main gases involved in creating the global Greenhouse Effect.

1. Gallons of gasoline used _______ x 22 pounds CO₂/gallon = ________________.

2. Miles of air travel _______ x 0.9 pounds/mile = ________________.

3. Miles on mass transit _______ x 0.5 pounds/mile = ________________.

4. Kilowatt hours _______ x 1.5 pounds/ kWh = ________________.

5. Therms natural gas _______ x 11 pounds/therm = ________________.

6. Gallons of propane _______ x 13 pounds/gallon = ________________.

Total pounds of CO₂ generated (add up all the numbers on the right) ________________.

Total pounds generated X (multiply by) number of people in your household = ________________ (Total You Generated)

**Reducing Your Impact**

In the space below, write down some actions that you and your family could do to reduce the Greenhouse Effect.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________