**Pembroke Cares**

Please participate in this **“Pembroke Cares”** Computer Science Big Data Case Study on Residential Household Carbon Foot prints, and how to improve your impact.

**Household Data Collection Form-** you will receive a report generated by participating students with your Household Carbon Footprint measurement and ways to improve your impact.

What’s My Carbon Footprint? This is an estimate of how many tons of carbon dioxide and other greenhouse gases your choices create each year. We will evaluate categories of Energy, Transportation, Food and Recycling.

**Personal Summary**

**Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**ECS semester 1 (programming) or 2 (robotics)**

**Period \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Getting Started**

1. How many people are there in your home? \_\_\_\_\_\_\_\_\_\_
2. Circle the best description of your household type

Single Family Home-detached

Single Family home-attached

Apartment Building 2-4 Units

Apartment Building 5+ Units

Mobil Home

1. How many bedrooms? \_\_\_\_\_\_\_\_\_\_

**Home Energy**

1. What has your family done to change your impact? (Check best response)
   1. We’ve taken steps to heat and cool our home efficiently

□ Wherever possible □ In some areas □ Very little

* 1. We have installed efficient lighting

□ Everywhere possible □ In some lights □ Not yet

* 1. We use ENERGY STAR ® appliances and electronics and unplug equipment when not in use.

□ Always □ Sometimes □ No

* 1. We have taken steps to reduce energy used for hot water.

□ As much as possible □ Somewhat □ Not yet

**Transportation**

1. What kind of vehicles do those in your household drive?

□ No vehicle

□ Hybrid (or > 40 mpg) roughly \_\_\_\_\_\_\_\_\_\_ miles per year

□ Small (30- 40 mpg) roughly \_\_\_\_\_\_\_\_\_\_ miles per year

□ Midsize (20-30 mpg) roughly \_\_\_\_\_\_\_\_\_\_ miles per year

□ Large (or < 20 mpg) roughly \_\_\_\_\_\_\_\_\_\_ miles per year

* 1. We check the air filter

□ Monthly □ Occasionally □ Rarely

* 1. We check the tire pressure

□ Monthly □ Occasionally □ Rarely

**Food**

1. What have you done to change your food and diet impact?
   1. We include meat in our diet

□ At most meals □ Most days, but not every meal □ Rarely □ Never

* 1. We eat organic food

□ Most of the time □ Sometimes □ Never or rarely

**Recycling**

1. What have you done to change your Recycling and Waste impact?
   1. We recycle

□ All materials locally recyclable □ Some of our waste □ Not much

* 1. We compost food scraps and yard trimmings

□ Whenever possible □ Sometimes □ Rarely

<http://www.nature.org/greenliving/carboncalculator/>

What's My Carbon Footprint

Inevitably, in going about our daily lives — commuting, sheltering our families, eating — each of us contributes to the greenhouse gas emissions that are causing climate change. Yet, there are many things each of us, as individuals, can do to reduce our carbon emissions. The choices we make in our homes, our travel, the food we eat, and what we buy and throw away all influence our carbon footprint and can help ensure a stable climate for future generations.

Your estimated greenhouse gas emissions are \_\_\_\_\_\_\_\_\_\_ tons of carbon dioxide (CO2) equivalent per year, which is **above the U.S. national average.**

**U.S. Average per person is 27** tons of carbon dioxide (CO2) equivalent per year

2 person U.S. household average is 53 tons of carbon dioxide (CO2) eq. per year

3 person U.S. household average is 80 tons of carbon dioxide (CO2) eq. per year

4 person U.S. household average is 110 tons of carbon dioxide (CO2) eq. per year

5 person U.S. household average is 130 tons of carbon dioxide (CO2) eq. per year

6 person U.S. household average is 160 tons of carbon dioxide (CO2) eq. per year

7 person U.S. household average is 190 tons of carbon dioxide (CO2) eq. per year

8 person U.S. household average is 210 tons of carbon dioxide (CO2) eq. per year

9 person U.S. household average is 240 tons of carbon dioxide (CO2) eq. per year

10+ person U.S. household average is 270 tons of carbon dioxide (CO2) eq. per year

**World Average per person is 5.5** tons of carbon dioxide (CO2) equivalent per year

2 person world household average is 11 tons of carbon dioxide (CO2) eq. per year

3 person world household average is 17 tons of carbon dioxide (CO2) eq. per year

4 person world household average is 22 tons of carbon dioxide (CO2) eq. per year

5 person world household average is 28 tons of carbon dioxide (CO2) eq. per year

6 person world household average is 33 tons of carbon dioxide (CO2) eq. per year

7 person world household average is 39 tons of carbon dioxide (CO2) eq. per year

8 person world household average is 45 tons of carbon dioxide (CO2) eq. per year

9 person world household average is 51 tons of carbon dioxide (CO2) eq. per year

10+ person world household average is 55 tons of carbon dioxide (CO2) eq. per year

**Ideas**

Send Free Ecards

http://www.nature.org/membership-giving/more-ways-to-give/ecards/index.htm

**Food**

Use reusable coffee mugs- not disposable

Eat more vegetables

Buy sustainable coffee

Body care: Only put on your skin ingredients that you’d be able to eat as well

Eat shellfish and local seafood

Ask where your food comes from

**Travel**

Car shares

Run a car on Vegetable oil

Do not litter- and pick litter up

Body care: Only put on your skin ingredients that you’d be able to eat as well

Eat shellfish and local seafood

Ask where your food comes from

Bike as much as possible and use a Bike trailer

<http://www.nature.org/greenliving/gogreen/everydayenvironmentalist/101-uses-for-a-bike-trailer.xml>

When hiking wash your soles of your boots so you do not transport invasive species

Take energy-efficient compact light bulbs on trips and give them out

Take the stairs

Less business travel- explore electronic meeting options

**Home**

Paper or plastic- neither. Reusable grocery bags

Reuse boxes, containers, bags

Buy gently used clothing; have and go to yard sales

Become conscious of the quantity of beauty products used

Go paperless on bills

Ask where your wood products come from- buy FSC

<http://www.nature.org/greenliving/gogreen/everydayenvironmentalist/buy-fsc-its-good-wood.xml>

Buy non-toxic household products

Be environmentally friendly at your office and school as well as at home

Carry non-plastic reusable water bottles (try aluminum)

What about the pets? Keep your cats indoors; do not choose clumping litter; choose eco-friendly recycled materials for collars and toys; choose natural or organic food and treats; use biodegradable poop bags when walking your dog; adopt shelter pets.

Raise chickens and bees

Buy local firewood

Diversify your garden with native plants

Compost

Last tip: Use a reel mower

<http://www.nature.org/greenliving/gogreen/everydayenvironmentalist/get-reel-with-your-mower.xml>

Fill out another Data Form in 60 days to calculate your percent change.