Carbon Calculator Student Guide

In this activity you will:

- 1. Examine your personal and household habits and choices in relation to your carbon footprint.
- 2. Identify which of your personal activities and household choices produce the most CO₂ emissions.
- 3. Compare your carbon footprint to the U.S. and global average.
- 4. Identify lifestyle changes you can make to reduce your footprint.

In this learning activity, you will use a Web-based carbon calculator to determine your carbon footprint. The carbon calculator is divided into 3 general areas (**Household**, **Transportation**, and **Food**) that scientists have determined to be main contributors to CO_2 emissions at an individual and household level. Each section of the carbon calculator includes questions that will help you understand how much of an impact you are having on the environment. A final tab (**Analysis**) keeps track of your results and will help you understand the impact of your carbon footprint.

Step 1: Download Data

- 1. Open your Web browser. Go to www.ei.lehigh.edu/learners/cc/.
- 2. Click Carbon Calculator.

Step 2 : Carbon Calculator Overview

1.	The carbon calculator Web site has 4 tabs across the top - Household, Transportation, Food, and Analysis. Each tab contains a different section of the carbon calculator.	Carbon Emissions Calculator
		Annual Carbon Emissions 0.00 tons 0.00 kg Annual Carbon Emissions From Household 0.00 tons 0.00 kg Household Transportation Food Analysis
2.	Beneath the first 3 tabs - Household, Transportation, and Food - are a series of questions that you will answer. Each response produces a CO_2 emissions value.	1. How many people live in your home? 1 2 3 4 5 6 or more 2. What type of home do you live in? An Apartment Townhouse:Row Home A house 3. Do you have Energy STAR appliances in your home? Yes

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3.	After you have	Carbon Emissions Calculator
	completed your	Annual Carbon Emissions Calculator
	responses to all	
	questions in a section,	4.000 kg Annual Carbon Emissions From Transportation
	you can use the Next	0.00 tons 0.00 kg
	or Previous buttons	Household Transportation Food Analysis
	to move back and	00
	forth between the	01
	different sections. In	
	addition, you can	Midsize © 0
	navigate to a different	
	section by selecting a	Larre SUV/Truck
	tab at the top of the	
	page.	
		Previous Next
1	In the top right corner	
Τ.	of the Web page the	Carbon Emissions Calculator
	calculator displays the	# 1 Annual Carbon Emissions
	total annual amount	0.00 tons 0.00 kg
	of CO ₂ emissions in	# 2 Annual Carbon Emissions From Household
	both tons and	0.00 kg
	kilograms for the	Household Transportation Food Analysis
	displayed section (#	◎ Not Sure ^
	2) A grand CO ₂	5. How often is the shower in your house used each day?
	emissions total of all	 1-2 times a day 3-4 times a day
	3 sections of the	5-6 times a day 7 or more times a day
	calculator is also	6 How many loads of laundry doos your household do each week?
	displayed (# 1).	• The many loads of failing does your nonsenold do each week:
		6 times
		© 8 times © 9 or more times
5.	The calculator will	
	also display the total	
	amount of carbon	
	produced for each	Carbon Emissions Calculator
	response to a	Annual Carbon Emissions
	question (# 1).	0.39 tons 355.01 kg
_		Annual Carbon Emissions From Household 0.39 tons
6.	The Analysis section	355.01 kg
	contains graphical	Household Transportation Food Analysis
	CO_2 emissions	1. How many people live in your home?
	summanes that are	
	produced based on	• 5 +0.39 tons CO2
	your responses to	© 5 © 6 or more
	Comparison graphs of	2. What type of home do you live in?
		An Apartment An Apartment
		Townhouse/Kow Home A house
1	cillissions are also	3. Do you have Energy STAR appliances in your home?
	of the carbon	© Yes -
	calculator	
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Step 3 : Using the Carbon Calculator

- Answer a question by clicking a selection button underneath a question (See #1 to the right). You can change your answer by clicking a different selection button.
- A CO₂ emissions value (# 2) is associated with each answer. This value is added to your total emissions for that section and your overall annual CO₂ emissions.
- You should observe how much each activity increases or decreases your annual CO₂ emissions (#2 to the right). This will help you in answering the **Analysis** questions.
- 4. To navigate between different tabs you can use the **Next** or **Previous** buttons at the bottom of the page. You can also select the tabs at the top of the page.



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Step 4 : Carbon Calculator Analysis

- 1. Starting with the **Household** tab answer all 18 questions in this section. Use the scroll bars in the Carbon Calculator to view all the questions further down the page.
- 2. After you have answered all of the questions in this tab, navigate to the **Transportation** tab by selecting **Next** at the bottom of the page.
- 3. After answering all of the questions in the **Transportation** tab, navigate to the **Food** tab by selecting **Next** at the bottom of the page.
- 4. After answering all of the questions in the 3 sections, navigate to the Analysis section.
- 5. The **Analysis** page provides a summary of the total CO₂ emissions and displays the CO₂ emissions data by each section.
- The left pie chart displays the percentage breakdown of your total CO₂ emissions by section. For comparison, the right pie chart displays the percentage breakdown by section produced by the average United States citizen.
- 7. If a CO_2 emissions section is less than 5% of the total, you will need to scroll the mouse over that section to view the breakdown. See the image below.



- 8. The lower bar graphs displays your total CO₂ emissions, the average United States citizen emissions (27 tons of CO₂ annually), and the average global citizen emissions (5 tons of CO₂ annually).
- 9. After reviewing the Analysis page, answer questions # 1-8 on the Student Investigation Sheet.