

## Teaching and Learning (T&L) Activity Submission

### Abstract

Title: What is my carbon footprint?  
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In this activity, students in History 035, “U.S. Contemporary Issues,” calculate and evaluate their own carbon footprints as they look at the role of citizen action in reducing negative environmental impacts as well as helping to influence and shape public policy. Civic Engagement is a focus throughout the High School Completion program and this “big idea” pairs logically and powerfully with the “big idea” of Environmental Stewardship in Sustainability. As a result of their participation in this activity, students will begin to evaluate their own impact on global warming and develop initial steps to change behaviors.

### Introduction and Overview

- a) History 035 is a high school completion course for students who have returned to EDCC to complete their requirements for a high school diploma. The materials for this activity is, therefore, are at a high school level. One pressing current issue that this course content includes is the environment, specifically global warming. The course focuses on government policy and the individual citizen’s rights and responsibilities in living with and influencing this policy. Students in the high school completion program benefit from activities that emphasize a personal connection to the content. The purpose of this activity will be to show students that global warming is not an abstract concept that only scientists can understand and wrestle with, but one in which their individual actions can have a lasting impact.
- b) This activity should take approximately 3 – 5 class sessions. I will be using this activity about midway through the quarter. Because students will be asked to share the results of their carbon footprint calculations, waiting until halfway through the quarter allows students to be more comfortable with their classmates and, I hope, more honest in their feedback and sharing of results.
- c) The assignment will merge the “big ideas” of Civic Engagement with Environmental Stewardship. Students will be analyzing their own contributions to global warming by calculating their carbon footprints and developing a plan to reduce this impact.

They will write a self –reflection, share ideas with classmates, and (time permitting) publish a list of student-generated ideas for individual action to stop global warming. I hope that by understanding the severity of the issue, and by noting what small actions can be done individually to make an impact, students will make conscious choices to bike to school, turn off electric appliances and shut down computers, etc. Additionally, all of our history courses in the HSC program stress the importance of voting. We have had guest speakers that include local elected officials and voting rights groups, such as Washington Bus. As students become more informed about the sustainability issues, it is my hope that they will be able to ask informed questions and vote with more knowledge and purpose.

## Teaching and Learning Activities

a) Students will begin the activity after reading a chapter in their text, *Current Issues*, entitled “Public Policy: Energy and the Environment.” This chapter will give them the background in federal agencies that make and carry out policy concerning the environment. They will also be introduced to some of the current environmental issues and some of the actions that are currently being taken or considered by the federal government. This will lead to our discussion of the individual citizen’s role in environmental policy.

b) The main learning activities are:

### **Class session #1 (This will take one or two class sessions)**

- General discussion of global warming and the role of carbon dioxide (Includes Power Point or video, readings and discussion of readings in small groups)

### **Class session #2**

- Review of current public policy/legislation regarding global warming
- Brainstorm the causes of excess carbon dioxide in the atmosphere. (Done in small groups then as a whole class)
- Discussion of individual’s role in global warming – Concept of carbon footprint

### **Class session #3**

- In computer lab or library lab, complete at least one carbon footprint survey (Students must be prepared with copies of or average estimate of electric bill and gas or oil bill, model and year of car, estimate of annual mileage driven in a year, number of times a week that they commute by bus, bike or walking, knowledge of what gets recycled at their house.)
- Explanation of written reflection assignment(the assignment task)

#### **Class session #4**

- Sharing of results and thoughts about the carbon footprint calculations
- List of ideas for personal actions
- Discussion of how to publish list

#### c) The assignment task: Written Self-Reflection

The full assignment is attached as a separate document. Included here are the questions:

1. Summarize your THREE carbon footprint calculations. What were the results? How do they compare/contrast? What surprised you about these results? WHY? (Don't forget the why!) Complete these questions for EACH of your calculations. (12 points)
2. What activities or behaviors in your daily life are having the GREATEST impact on global warming? Which activities or behaviors in your daily life have the LEAST impact? (4 points)
3. Looking at your response to Question #2, what specific actions (a minimum of five) will you take now and in the future to reduce your carbon footprint? Be sure to be specific about how you will carry this out. (For example, will you take the bus on Mondays and Tuesdays to work? Will you recycle your pop cans?) (5 points)
4. What do you think will be the most effective way to deal with the crisis of global warming? Do you think there are specific government policies or laws that need to be implemented? Do you think citizens should make changes voluntarily? Should it be a mixture? Explain your thinking. (5 points)
5. Do you think your friends and family are aware of actions to take to reduce global warming? Explain. (3 points)
6. If you had an opportunity to ask a question about global warming to one of your state or U.S. senators or representatives, what would you ask? What suggestions do you have for them to keep you and your family and friends informed of the work that is being done by the government? (3 points)
7. How did this assignment change how you feel about the issue of global warming? Explain. (3 points)

#### **Resources**

*Websites for carbon footprint calculations:*

[www.myfootpring.org](http://www.myfootpring.org) – Center for Sustainable Economy

<http://www.safeclimate.net/calculator/> -- World Resources Institute

[www.epa.gov/climatechange/emissions/ind\\_calculator2.html](http://www.epa.gov/climatechange/emissions/ind_calculator2.html) -- Environmental Protection Agency

*Media sources for background on global warming: (Still developing this list)*

1. Course Textbook: *Current Issues* (Close Up Publishing) – Chapter 6, “Public Policy: Energy and the Environment”
2. Excerpt from Kluger, Jeffrey. “Polar Ice Caps are Melting Faster than Ever . . . More and More land is Being Devastated by Drought . . . Rising Waters are Drowning Low-Lying Communities . . . By any Measure, Earth is at . . . the Tipping Point.” *Time Magazine* 26 Mar. 2006.
3. “Global Warming Fast Facts.” National Geographic News 14 June 2007.
4. [www.thegreenguide.com](http://www.thegreenguide.com) (National Geographic)