

## ***Honors Chemistry – Carbon Footprint Report Assignment***

**Due:** Monday after Thanksgiving (12/01/2025) – Must be uploaded to Archie before class begins

**Presentation:** Be prepared to present your findings in class.

### ***Assignment Overview***

Students, you are required to research **\*carbon footprints\*** and prepare a formal written report. This assignment will help you understand how individual and household choices impact the environment, and how chemistry connects to global sustainability.

### ***Report Requirements***

Your report must include the following sections:

#### **1. Introduction – What is a Carbon Footprint?**

- \* Define carbon footprint in scientific terms.
- \* Provide general background information.

#### **2. Causes of Carbon Footprint**

- \* What human activities increase carbon emissions?
- \* Include examples from transportation, electricity use, food production, waste.

#### **3. Consequences of an Increased Carbon Footprint**

- \* Environmental impacts (climate change, global warming, sea-level rise).
- \* Chemical relevance (greenhouse gases, CO<sub>2</sub> concentration, atmospheric effects).

#### **4. Your Family's Carbon Footprint Calculation**

- \* Use any reliable carbon calculator tool (EPA, Nature Conservancy, WWF, etc.).
- \* Show the categories measured:

Transportation(miles driven, type of car, flights)  
Home Energy Usage(electricity, natural gas, heating)  
Waste Production(recycling, trash)  
Food & Lifestyle choices  
Include a short table or summary of results.

#### **5. Plan for Reducing Your Carbon Footprint**

- \* List at least 5 practical steps your family could take.
- \* Explain how each step reduces emissions.

#### **6. Resources / Citations**

Cite all websites, articles, textbooks, and calculators used.

#### **7. Diagrams, Pictures, and Charts**

- \* These must be placed **\*separately\***, at the end of the report (after citations).
- \* Images must be clearly labeled.

## ***Formatting Guidelines***

### **Your report must follow this format:**

Font: Times New Roman

Font Size: 12 pt

Spacing: 1.5

Length: Minimum 2 full pages of typed text (not including images, charts, or citations)

Header: Name, Grade, Class Period, Title (“Carbon Footprint Report”)

File Type for Upload: PDF

### **Recommended Carbon Footprint Report Structure**

You may use the following format:

Title Page:

- \* Student Name
- \* Honors Chemistry – Dr. Kalai
- \* Date
- \* Title: My Carbon Footprint Analysis

Section 1: Introduction – Definition and Overview

Section 2: Causes of Carbon Footprint

Section 3: Environmental & Chemical Consequences

Section 4: My Family’s Carbon Footprint Calculation

- \* Calculator used
- \* Table of results
- \* Discussion

Section 5: My Plan to Reduce Carbon Footprint

Section 6: Conclusion

Section 7: References / Works Cited

Section 8: Figures, Diagrams, Charts (labeled as Figure 1, Figure 2, etc.)

### **Presentation Requirements**

- \* 2–3 minutes per student
- \* Summarize the key findings from your report
- \* Include your family’s carbon footprint results
- \* Discuss at least 3 strategies to reduce carbon emissions
- \* Visuals are encouraged (charts or one slide)