

## Data Interpretation Worksheet

The following questions are intended to help you think through your data and interpret what it means. The questions are fairly general due to the wide variety of projects. Write 3-4 sentences in response to each **primary question** (4 primary questions total). Use the secondary questions to help you think about how to answer each primary question. Your answers provide content for your poster or presentation.

### 1. After completing data analysis (statistics, charts, etc.), what patterns do you see?

*(Note: This information belongs in the "Results" section of your poster.)*

- How do the levels of each pollutant change over time?
- What explains the spikes, or changes in pollutant concentration?
- How do the pollutants differ across space?
- Can you tell a story with your data? What graphs are best to communicate your storyline?
- How do the pollutants differ from each other? (For example, are the pollutant concentrations correlated or inversely related? Could this be explained by a concept we have covered, such as complete vs. incomplete combustion?)

### 2. What do your results mean?

*(Note: This information belongs in the "Discussion" section of your poster.)*

- Have you answered your research question? If you haven't, why not?
- Do your results support your hypothesis? Or do the results cause you to reject the hypothesis?
- Do the results relate to any background material you looked at (such as articles you read, datasets you looked at, stories you heard)?
- What is the story your results tell? (Explain in terms such that someone unfamiliar with this class and project could understand.)

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

**3. What are the limitations of your data?**

*(Note: This information belongs in the "Discussion" section of your poster.)*

- What are possible sources of error? What impact may they have had on the results? Examples of error include, a sensor malfunctioning or a second source also emitting the pollutant you were interested in, thus obscuring the results.
- How would you confirm that your interpretation/understanding of the results is correct? What additional research/tests would you conduct?
- If you were to continue addressing this research question or hypothesis, what would be your next steps or future work?

**4. Are your conclusions important with respect to the bigger picture?**

*(Note: This information belongs in the "Discussion" section of your poster.)*

- How and why do these results matter for public or environmental health?
- What about for climate change?
- Would you make recommendations (to your local government, for example) based on this data? Why or why not?