**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?)
1. **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.)
1. **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 your 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?
1. **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?