Hudson Data Jam Competition 2023

Written Report Form

***Delete* pages 1-4 of this document. The table below is for your reference!**

Complete all components of the report (see page 5), as outlined in the table below. Students are required to include information and citations from two sources *beyond* the Metadata/Background file (not required for Junior Data Jam). These sources could come from scientific publications, newspaper articles, or reputable online sources.

| **Report Components**  (These are the same as the Rubric, but this chart gives more detail.)  **\*Please Note:**   1. **Reports should be *no more than 10 pages* including figures, tables and text (single spaced, font at least 11 pt, margins of at least 1”)** 2. **Components required for *Junior Data Jam* are designated by \*\*\* in the table below.** | |
| --- | --- |
| **1. Title/Organization\*\*\*** | Include the title, name(s), grade(s), and school name(s) of all students who participated in the project.  The report should be typed in a readable font, well organized, and free of spelling and grammatical errors. |
| **2. Introduction**  (1 paragraph) | Start your report by describing your topic to someone unfamiliar with it. Include the scientific question you investigated and a brief claim about what the dataset showed. Give an overview of the project but do not go into specific detail in your introduction. |
| **3. Dataset Description**  (1 paragraph) | Introduce the experiment to the reader. Explain what the variables are. Include as much information as you can about who collected the data, how they collected the data, where they collected the data, when they collected the data, why they collected the data, and the source of the data (ex: Vassar College, NOAA, Snapshot Day, Cary Institute), and any other relevant information. *Explain why a scientist might study these variables.* |
| **4. Data Representations\*\*\*** (Graphs) | Your team will need to *create* at least one graph or chart of the data. Hand-drawn graphs are acceptable if they are neat and legible. Remember to label your axes and include a graph title. If you selected a large dataset, your representation only needs to include the variables that are relevant to your investigation. |
| **5. Data Trends or Comparisons\*\*\***  (1-2 paragraphs; 2-3 sentences for Junior Data Jam) | Describe the trend(s) or comparison(s) in the dataset(s) you used for your project. In other words, *What does the graph look like?* Make sure to use basic descriptive statistics (ex: average, range, standard deviation). Describe and address variability if applicable.  Examples:   * The average annual blue crab population increased over time from 158 to 2,703 crabs/m2. * Despite the overall increase in pearly mussels from 1995-2010, the mussel population sharply dropped in 2003. * The precipitation in Poughkeepsie was variable from 1997-2012. * Fish populations were higher in Beacon than at Norrie Point in 2008. * There appeared to be no clear correlation between phosphorous and salinity levels from 1990-2000.   If you used two datasets for a comparison, how were the data similar? How were they different? |
| **6. Data Interpretation\*\*\* (Explanation)**  (1-3 paragraphs; 1-3 sentences for Junior Data Jam) | Use reasoning and what you know about the topic to explain the trend(s) or comparison(s) you discovered. In other words: *Why do you think the graph looks the way it does? Why do you think your trend happened?* Why is your finding interesting and important? Are your results expected or surprising? What environmental processes might be causing what you discovered?  Make sure to support your explanation with evidence and be consistent with current scientific ideas. |
| **7. New Questions and Hypotheses**  (1 paragraph) | Remember -- for your creative piece, your job is just to describe the data. However, when you look at data closely, you will inevitably start asking more questions that you can’t answer without more research, such as 'Why did the numbers go down in 2003?' Or, 'What's happening in Beacon to make the site so different from others?' The report is your place to ask 'Why?' and 'What's up with that?' Then brainstorm some hypotheses. Hypotheses are the explanations your brain comes up with when you ask that 'Why?' question. You start thinking 'Maybe...' That 'maybe' is your hypothesis. Be sure to give at least two new ideas (hypotheses and/or questions) about future scientific research that could be done on this topic. |
| **8. Written Explanation of Creative Project\*\*\***  (2-5 sentences) | Explain why you chose your creative method and what message you hope audience members will take away from your project. For example, "We believe the best way to help a general audience relate to and understand our findings is to create a fun, engaging, educational video. We hope that people who watch our video will realize that salt levels in the Hudson River strongly affect where different fish species can live.” If you create an abstract visual art piece like a sculpture you may need a longer description here. |
| **9. Brief Reflection on Data Jam**  (2-5 sentences) | Let us know what you thought about your Data Jam experience. You might consider the following questions: Was Data Jam challenging or easy? What was the hardest part? What was the most fun part? What did you learn from Data Jam? How would you change Data Jam if you had the chance? Do you think there is a way to share your project with an audience outside of Data Jam? |
| **10. Reference List\*\*\*** | Include at least two references from outside of the Metadata document (e.g., data source, graph or table source, and anything used to explain the data interpretation). You can use any standard citation form (APA, MLA, etc.)  *For Junior Data Jam, participants only need to cite the source of their chosen data set (i.e., HRECOS).* |
| **11. Link to Creative Project**  (if applicable) | If you upload your creative project to YouTube, make sure you include a link for judges! |

**Hudson Data Jam 2023 Report Form**

**Team Information**

Project Title:

School Name:

Name of Dataset(s):

Level of Dataset(s):

Team Advisor’s Name(s):

Team Members’ Names (First and Last):

*All reports must include the following sections, with each section labeled with the number and title listed. You may fill in this document, or create a separate file with the same headings. See the* [***RUBRIC***](https://www.caryinstitute.org/sites/default/files/public/downloads/hudson_dj_rubric_2022.pdf)*for more details on what to include in each section. You must also complete a creative project for your entry to be judged. Reports should be no more than 10 pages including figures, tables and text (single spaced, font at least 11 pt, margins of at least 1”)*

**1. Title** --- with student names, grades, and school (see above)

**2. Introduction** – background, question and hypothesis about the data

**3. Dataset(s) Description** – describes variables and methods used, data source

**4. Data Representation(s)** – graphs, charts, or other type of data summary

**5. Data Trend(s) or Comparison(s)** – described, referring to representation(s)

**6. Data Interpretation –** explanation of why data trends or differences occurred

**7. New Questions and Hypotheses**

**8. Explanation of Creative Project**

**9. Reflection on Data Jam Experience**

**10. References** – include at least 2 references, properly cited

**11. Link to YouTube video** (if applicable)