Baltimore Data Jam Competition
High School Student Guide

Bringing socio-ecological data to "life" for non-scientist audiences
Guidelines for the Spring 2020 Competition

Hello Baltimore Data Jam Competitor!

The Baltimore Ecosystem Study welcomes you to join the 2020 Baltimore Data Jam Competition. We need your creativity and scientific know-how to help inform non-scientists about the ecology of the Baltimore region.

Your challenge, should you choose to accept it, is to delve into a data set, or two, of ecological data about Baltimore. Identify trends or comparisons and then get your creative juices flowing! Build an interactive model, write a song, perform a skit or create a video to tell the story of your data. Visit the Baltimore Data Jam website for step by step instructions on how to enter the competition
https://baltimoreecosystemstudy.org/data-jam/

Below is a guide for how your report and creative project will be scored. Each teams' entry will be judged by at least three different people ranging in background from scientist to educator to artist. The rubric on the following pages will ensure that you have completed each component of the competition to the best of your ability. You may ask an adult to review your entry, but remember, this is a student competition and your final submission must reflect the work of yourself and your teammates.

For questions regarding the competition or your entry, contact Bess Caplan at caplanb@caryinstitute.org.

www.baltimoreecosystemstudy.org – The Baltimore Ecosystem Study

Baltimore Data Jam Competition – Judging Rubric

Does your project include…

1) **A written scientific report?**   ☐ **Yes**   ☐ **No**

2) **An interpretive creative component?**   ☐ **Yes**   ☐ **No**

Report Content & Organization - 10 points					
	Outstanding	Above Average	Average	Below Average	Poor
Report is typed in a readable font, easy to read and understand, neat, and free from spelling and grammatical errors.	10	8	6	4	2

	Check Mark	Report Components
		1. Title --- with student names, grades, and school
		2. Introduction – background, question and claim about the data
		3. Dataset(s) description – description of 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. Explanation of *why* data trends occurred
		7. New questions and hypotheses
		8. Explanation of creative project
		9. Reflection on Data Jam experience
		10. Reference List – include at least 2 references, properly cited

Scientific Merit of the Written Report - 50 points						
NOTE: Each category corresponds to a section of the DJ Report. Each section should be a paragraph of text (2-7 sentences).	Outstanding	Above Average	Average	Below Average	Poor	No Evidence
1. Title Project includes a clear and engaging title, names of all student authors, grade(s) and school name(s).	1					0

2. Introduction
  a. Includes background information needed by someone unfamiliar with the science topic to understand the project.
  b. Research question and null and alternative hypotheses are clearly stated
  c. Identifies the variables in the dataset(s)
	5	4	3	2	1	0

3. Dataset(s) Description
  a. Dataset(s) are described accurately and clearly including:
 	
    ● Methods used to collect the data
    ● Who collected the data,
    ● Where and when data were collected,
    ● Source of data (ex: NOAA, HRECOS, Cary Institute).
  b. Variables are identified accurately and explained clearly. Ex: The independent variable measured in this experiment was time and the dependent variable was blue crab density.
	10	8	6	4	2	0

4. Data Representation(s)
Graph(s), table(s) or other type of summary includes:
 	
    ● Clearly displayed data (points, bars, etc.)
    ● Labeled axes
	8	7	5	3	1	0

5. Data Trends or Comparisons
  a. Trend(s) or comparison(s) are described accurately, using basic descriptive statistics (ex: mean, standard deviation). Ex: The average annual blue crab population increased over time from 158 to 2703 crabs/m^2.
  b. If two or more datasets were used, students describe how data are similar and different
	10	8	6	4	2	0

6. Explanation (Data Interpretation)
  a. Uses reasoning to explain the trend or comparison discovered
  b. Discusses why the trend or comparison is interesting
  c. Uses basic descriptive statistics (mean, standard deviation, t-test, etc.) to describe variability
	10	8	6	4	2	0

		Outstanding		Above Average			No Evidence
d. Explains potential sources of variability							
7. New Hypotheses & Questions Includes at least two additional ideas for future scientific research.	2		1				0
8. Explanation of Creative Project Explains why students chose a particular medium and what message they hope audience will learn from their creative project.	1						0
9. Reflection Student reflects on their personal Data Jam experience.	1						0
10. Reference List Project clearly and accurately cites 2 outside sources besides the dataset and metadata.	2		1				0

Creativity In Communicating Data						**40 points**	
	Outstanding	Above Average	Average	Below Average	Poor	No Evidence	
Creativity Project idea (ex: poem, skit, video) is creative and original.	10	8	6	4	2	0	
Message Project has a message that is easily understandable for a non-scientist audience.	10	8	6	4	2	0	
Craftsmanship Materials, media or resources are used skillfully and effectively to create an appealing project.	10	8	6	4	2	0	
Data Incorporation The creative product accurately portrays the trend(s) in the data.	10	8	6	4	2	0	

Dates to remember:

- Register by **May 6, 2020**
- Submit signed Parental Consent form by **May 20, 2020**
- Projects must be submitted electronically by **May 27, 2020** (contact Bess Caplan at caplanb@caryinstitute.org to arrange delivery of physical models or sculptures).
- Data Jam Announcement of Winners – **June 19, 2020** – winners will be announced online.

BEST OF LUCK!