



## Baltimore Data Jam Competition – Middle School Judging Rubric 2020

*Screening questions: Does the project include...*

- 1) A written scientific report?                       Yes             No
- 2) An interpretive creative component?             Yes             No

**If you answered “no” to either of these questions, please inform the contest administrators and do not continue scoring the project.**

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

**The table below is for student reference, only. Judges will skip this part.**

Check Mark	Report Components
	1. Team Information --- with student names, grades, and school
	2. Background Information – background, question and claim about the data
	3. Data Analysis– 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 <i>why</i> data trends occurred
	7. New questions and hypotheses
	8. Reflection on Data Jam experience
	9. Explanation of creative project
	10. Reference List – include at least 1 reference, properly cited

<b>Scientific Merit of the Written Report - 50 points</b>						
	Outstanding	Above Average	Average	Below Average	Poor	No Evidence
NOTE: Each category corresponds to a section of the DJ Report. Each section should be a paragraph of text (2-7 sentences).						
<b>1. Team Info</b> Project includes names of all team members, team advisors, and school name(s).	1					0
<b>2. Background Information</b> a. Includes background information needed by someone unfamiliar with the science topic to understand the project. b. Dataset(s) are described accurately and clearly including: <ul style="list-style-type: none"> <li>• Methods used to collect the data</li> <li>• Who collected the data,</li> <li>• Where and when data were collected,</li> <li>• Source of data (ex: NOAA, HRECOS, Cary Institute).</li> </ul>	5	4	3	2	1	0
<b>3. Data Analysis</b> a. Research question and null and alternative hypotheses are clearly stated b. Identifies the variables in the dataset(s) c. 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
<b>4. Data Representation(s)</b> Graph(s), table(s) or other type of summary includes: <ul style="list-style-type: none"> <li>• Clearly displayed data (points, bars, etc.) AND Labeled axes</li> </ul>	8	7	5	3	1	0
<b>5. Data Trends or Comparisons</b> 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 <sup>2</sup> . b. If two or more datasets were used, students describe how data are similar and different c. Describes whether data supports hypothesis	10	8	6	4	2	0
<b>6. Explanation (Data Interpretation)</b> 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 d. Explains potential sources of variability	10	8	6	4	2	0
<b>7. New Hypotheses &amp; Questions</b> Includes at least two additional ideas for future scientific research.	2		1			0
<b>8. Reflection</b> Student reflects on their personal Data Jam experience.	1					0
<b>9. Explanation of Creative Project</b> Explains why students chose a particular medium and what message they hope audience will learn from their creative project.	1					0
<b>10. Reference List</b> Project clearly and accurately cites 1 outside source besides the dataset and metadata.	2		1			0

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

**Judge's Comments:**