Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Endothermic v. Exothermic Investigation Report Rubric

|  |  |  |
| --- | --- | --- |
| **Sections** | **Comments** | **Points Earned** |
| Knowledge Probe Summary  |  |  |
| * The knowledge probe is written in complete sentences in the form of a paragraph. (1 point)
* Includes science concepts from the knowledge probe including (but not limited to) endothermic process, exothermic process, temperature change and bonds. (You may also include examples.) (2 points)
 |  | /3 points |
| Prediction |  |  |
| * The word “If” is followed by an explanation of what is being tested (independent variable). (1 point)
* The word “then” is followed by a prediction about the change in what will be measured (dependent variable). (1 point)
* Includes scientific reasoning that is found in the knowledge probe summary. (1 point)
 |  | /3 points |
| Observation |  |  |
| * Qualitative Data - Qualitative data (using your 5 senses) is provided and describes what was observed during each reaction. (3 points)
* Quantitative Data - The Quantitative Data section includes the initial temperature and the temperature recorded everything 30 seconds for 3 minutes. (3 points)
 |  | /6 points |
| Data Analysis  |  |  |
| * Your Group’s Data Analysis data table is filled in accurately. (3 points)
* The Class Data Averages per Combination data table is filled in accurately. (1 point).
* Graph - The class averages are graphed accurately (1 point).
	+ There are labels and units on the x- and y-axes (1 Point).
	+ The graph has a title that describes the relationship between the independent and dependent variables (1 Point).
	+ There are two arrows on the graph identifying what the author noticed as well as an explanation about what that means with relationship to the investigation (2 points).
 |  | /9 points |
| Explanation  |  |  |
| * Claim (2 points)
	+ The claim clearly answers the question using complete sentences. (1 point)
	+ The claim is correct based on the findings in the investigation. (1 point)
* Evidence (2 points)
	+ The evidence mentions a comparison, trend or relationship between variables, which directly supports the claim using complete sentences. (1 point)
	+ The evidence includes specific data from the investigation. (1 point)
 |  | /4 points |
| Evaluation |  |  |
| * At least three possible sources of error are listed. The impact those sources of error may have had on the results are explained (2 points).
* Explains confidence level using the Confidence Chart (2 points).
* Explains at least one significant thing that could be done differently next time (1 point).
 |  | /5 points |
| **TOTAL POINTS** | **/30**  |

**MASTERY 26-30**

**ADVANCED 23-25**

**MEETS 20-22**

**APPROACHING 17-19**

**BEGINNING 16 and below**