Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Science Project Rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Accomplished** | **Approaching** | **Developing** | **Beginning** |
| **Research** | 10 | 8 | 7 | 5 |
| * 5 scholarly articles
* Research matches the question.
* Hypothesis is based on research gathered.
* Correct Citations format
 |  |  |  |  |
| **Experiment** | 20 | 16 | 14 | 10 |
| * Design (please see Experimental Design rubric)
* Documented experiment (pictures/video)
 |  |  |  |  |
| **Analysis** | 20 | 16 | 14 | 10 |
| * Data table
* Appropriate type of graph
 |  |  |  |  |
| **Results (see packet)** | 10 | 8 | 7 | 5 |
| Paragraph(s) includes* IV
* DV
* Explanation of results
* Comparison of levels of IV
* Data reliability
 |  |  |  |  |
| **Conclusion (see packet)** | 20 | 16 | 14 | 10 |
| Paragraph(s) includes* Purpose
* Experimental error
* Hypothesis
* Experimental errors
* Improvements
* Further studies
 |  |  |  |  |
| **Presentation**  | 10 | 8 | 7 | 5 |
|  (See Presentation Handout)Trifold board that includes visual(s). |  |  |  |  |
| **Format** | 8 | 6 | 5 | 4 |
| * Grammatically correct
* Correct punctuation
* Free of spelling errors
* Third person language (no prounouns)
 |  |  |  |  |
| **On Time**Final product | 2 | 0 | 0 | 0 |
| **Final Grade** |  |

|  |
| --- |
| **Experimental Design Rubric**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 5 (MASTERY) | 4 | 3 (UNDERSTANDING) | 2 | 1 (DEVELOPING) |
| **Independent Variable****(IV)** | * Variable and how it was changed was specific and the unit of measure was included if appropriate.
 | * Variable and how it was changed was specific
 | * Variable named but did not indicate how it was changed
 | * An incorrect variable was identified (IV/DV were switched)
 | * A non-related variable was identified
 |
| **Levels of IV** | * The different levels (types of the IV) have been correctly identified including units.
 | * The different levels (types of the IV) have been correctly identified.
 |  |  | * The different levels (types of IV) have not been identified or are incorrect
 |
| **Control** | * Control is identified or experiment does not have a control
 |  | * Control is identified but is incorrect
 |  | * No control identified in an experiment that has one.
 |
| **Dependent Variable****(DV)** | * The variable that will change as a result of the changed IV has been correctly identified, including units of measure
 | * The variable that will change as a result of the changed IV has been correctly identified but units were not identified
 | * The correct units of measure have been identified but not for the correct variable
 | * An incorrect variable was identified (IV/DV were switched)
 | * The identified variable is incorrect
 |
| **Repeated Trials** | * Many trials have been planned in order to collect a large enough sample (three or more).
* In scenario, repeated trials are correctly identified.
 |  | * Number of repeated trials identified/ planned for does not match experiment
 | * Too few repeated trials have been planned for
 | * No repeated trials have been planned for.
* In scenario, repeated trials are not/incorrectly identified.
 |
| **Constants** | * Several (3 or more) strong, specific variables that could impact the results have been identified.
 |  | * Multiple variables are identified but less than 3 are strong, specific variables.
 | * There is a list of weak or non-specific variables that could impact the results.
 | * Only one variable that could impact the results was identified
 |
| **Hypothesis** | * Well-written in “If, then, because…” format - “If” explains how IV is changed ,“then” explains how DV will change
 | * Written in “If, then, because…” format with the correct IV and DV; may include pronouns
 | * “If, then, because…” format may/may not have been used; details are not specific
 | * “I think” format includes correct IV and DV
 | * An attempted prediction was made
 |