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 |