**Science Lab Rubric**

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| --- | --- | --- | --- | --- |
|  | **3 points** | **2 points** | **1 point** | **0** |
| **FORMAT** |  |  |  |  |
| Heading |  |  |  | Contains appropriate title, name, date, course, teacher, period. |
| **EXPERIMENT** |  |  |  |  |
| Aim | Clear statement of intent that the experiment will attempt to demonstrate. | Aim is evident but lacks clarity. | Aim is incorrect. | Aim is missing. |
| Introduction | Introduction shows clear relationship to the aim. Proper and valid citations of background information included. | Introduction shows some relationship to the aim. Proper citations are included. Contains 4-6 sentences. | Introduction shows vague relationship to aim. Background information is not cited and/or not from a valid source | Introduction is missing or is lacking background information. |
| Hypothesis | Clear “If...then...because” statement. Including the dependent and independent variable | Clear “If...then” statement. Includes both the dependent and independent variable | Statement is not in the proper format and/or missing one variable | Hypothesis is missing |
| Materials | Bulleted list of equipment and materials including size, amounts, and appropriate units . | Complete listing of equipment but missing size, amounts, and appropriate units. | 3-4 items missing from list | Materials Section Missing |
| Procedure | Clear step-by-step, numbered, description of experimental procedures; labeled diagrams/drawings of any apparatuses/devices used to carry out the experiment if necessary. Safety precautions included, as appropriate. | Step-by-step, numbered, description that misses not more than one key detail; diagrams/drawings included if necessary but not labeled. Safety precautions are included, as appropriate. | Step-by-step description that misses not more than two key details; apparatuses/devices mentioned but not shown. Missing safety precautions, if appropriate. | Procedure missing |
| **DATA and ANALYSIS** |  |  |  |  |
| Raw Data | Appropriate and accurate quantitative and qualitative data displayed in organized data table(s).  Title, headings, units, and captions when appropriate | Data tables are present but a 1-2 pieces are missing. | More than 2 pieces of data are missing. Tables are difficult to read.  . | Most of data is missing.  or  Data is not in table format. |
| Processed Data | Sample calculation utilizing data.  Data needs to be displayed in appropriate tables with title, headings, units, and captions. | Sample calculation is improperly used.  Data is displayed appropriately, but 1 piece is missing. | Sample calculation is missing.  2 or more pieces of processed data is missing. | No evidence of processed data |
| Graphs | Graphs are accurate, relevant to the data, labeled, properly titled and easily understood. | Graphs are accurate and relevant but a mistake or incorrectly titled or missing 1 component | Graphs are sloppy, title missing or missing 2+ components | Relevant graphs are missing. |
| **CONCLUSION** |  |  |  |  |
| Claims | Restates the hypothesis, supports or refutes it and explains the role of the experiment in making the decision. Makes clear connection to the aim. | Restates the hypothesis and supports or refutes it. Connection to the claim is unclear. | Supports or refutes the hypothesis without restating it or connection to claim is absent. | Does not address the hypothesis nor make a connection to the aim. |
| Evidence | Claim is supported and discussed through analyzed and interpreted data. Reference is made to the data through the discussion of patterns and trends. | Claim is supported and discussed through analyzed and interpreted data. Reference is made, but clarity and/or connection is lacking. | Claim is supported, but data is not analyzed, and reference to the data is missing two or more elements | Claim is not supported and no reference is made to the data |
| Error | Identifies sources of error and explains effect on results. | Identifies sources of error. | Suggests possibility of error but identifies no sources. | Does not address possibility of error. |
| Improvement and future research | Meaningful and appropriate suggestions that relate back to the stated errors are made. | Meaningful and appropriate suggestions are made, but the relationship to the stated errors is weak. | Suggestions are attempted. Relationship to stated errors is not evident. | No improvements or suggestions are made. |
| Research | Claim and/or error supported with information from the reading. References present and cited. | Claim and/or error supported with information from the reading. Citation is missing | Claim and/or error supported with information from the reading, but no direct reference present nor is cited. | Claim and/or error not supported with information and no citation made. |
| **MECHANICS**  **AND LAB SKILLS** |  |  |  |  |
| Sequence and Clarity | Logically sequenced: All sections represented; Lab report sections clearly distinct from each other | Not more than one category missing or out of sequence; Sections clearly labeled but not separated | Not more than 2 categories missing or out of sequence; Sections labeled but not separated | More than 2 categories missing or out of sequence Sections not labeled nor separated |
| Grammar | grammatically correct English | 1-2 grammar mistakes | 3-4 errors in grammar/spelling; | 5 or more errors in grammar/ spelling |
| **LAB SKILLS** |  |  |  |  |
| Lab technique and safety | Follows instructions adequately and pays attention to safety issues | Follows instructions but requires assistance and usually pays attention to safety issues | Rarely follows instructions or requires constant supervision and/or rarely pays attention to safety issues | Requires constant supervision and does not pay attention to safety issues. |

Comments:

Total: \_\_\_\_\_\_\_\_/48