Science Fair Rubric

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

Date: March 12, 2020

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Area Assessed** | **9** | **8** | **7** | **0** |
| **Abstract** | Abstract is a 4 paragraph, 250 word or less summary of the project including; **the purpose of the experiment, hypothesis, procedures used, data, and conclusion.** | Abstract is a 250 word or less summary. Some of the required information is included, **only one topic is missing**; purpose of the experiment, procedures used, data, or conclusion. | Abstract is included, but does not contain all the required information. **Two or more pieces of information is missing**; the purpose of the experiment, procedures used, data, and conclusion | An abstract is not included in the research paper.  More than 250 words are included. Abstract does not include any of the required information |
| **Table of Contents** | The table of contents includes **all the required items listed with an associating page number** where the information can be found. | A table of contents is included, but **1 topic and page number is missing.** | A table of contents is included, **but 2 or more topics and page numbers are missing**. | No table of contents is included. |
| **Introduction and Background Research** | Max page length: 1 page (grades 3/4) & 2 pages (grades 5-8) giving a clear report introduction. This page gives the background info garnered from library research and tells why the interest in the science experiments. | Does meet the page limitation. An introduction to the report, **but only one piece information is missing. Some information is unclear.** | Page limitation is not met. The introduction is **not very clear. More than two pieces of information is missing.** | No introduction is included in the research paper. |
| **Hypothesis** | Written as an “If \_\_\_, then because \_\_\_” statement including the independent and dependent variable**.** | Written as an “If \_\_\_, then \_\_\_” statement, but **no because statement is provided.** | A hypothesis is provided, **but is not written as an “If \_\_\_, then \_\_\_” statement**. No because statement is provided. | No hypothesis is included in the research paper. |
| **Variables** | All variables are included: independent, dependent, & constant(s)**. Each variable is correctly identified.** | All variables are included; IV, DV, CV. **Only 1 variable is not correctly identified.** | All variables are not included; IV, DV, or CV. **2 or more variables are not correctly identified**. | No variables are included in the research paper. |
| **Materials** | A list of specific items used in the experiment is provided. **The list is written vertically** and includes; the exact amounts used, metric measurements used, and any construction information as needed. | A list of items used in the experiment is provided, but is not specific. **The list contains items used, but not the exact amount with units of measurement.** The list is written vertically. There is also construction information. | Items used are included, **but not written verticall**y.  There are amounts included, but **without the unit of measure.** There is no construction information include. | No materials are listed for the project.  The materials list is incomplete. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Area Assessed** | **9** | **8** | **7** | **0** |
| **Procedures** | A **greatly detailed step by step procedure is included in a numbered list.** There is indication that **5 trials were conducted.** There are indications that **observations were made and recorded while conducting each trial of the experiment**. There is also indication that **data was recorded** during **each trial** of the experiment. This experiment **could be replicated by someone**. | A **detailed step by step procedure** is included. There is indication **that 5 trials were conducted.** There is indication that **data was collected during the experiment.** There is also indication that **some observations were made during the experiment.** Experiment could be replicated by someone. | A **procedure is included.** There is indication that **3 trials were conducted**. There is indication that **some observations were made and data was collected.**  **This procedure could not be replicated.** | No procedure is included.  It is hard to understand what procedure was conducted during this experiment. No observations were recorded. No data was collected. |
| **Results** | Graphs, tables, or charts are used to display data collected. These visuals are labeled correctly. A **clear explanation of the results** is included. | A graph, table, or chart is included to represent the data collected. The visuals are labeled correctly. A brief explanation of the results is included. | No graphs, tables, or charts are included. A statement about the collected data is included, but is not clear. | No information related to the results of the experiment is included. |
| **Discussion**  (Conclusion in the lab write-up) | Meets page limitation. **This is a clear interpretation of the results from the experiment.** Includes an explanation of what caused the results, how the results relate to the background research collected, what results were expected, and any possible errors. **There is also connection to the stated hypothesis.** | Meets page limitation. Results are interpreted, but **information included does not give a clear explanation of what caused the results.** There is no connection to the background research collected. There is a connection to the stated hypothesis. | Meets page limitation. A **discussion of results is included but does not make any connections** to why the results came about. There is no connection to background research. No connection to the stated hypothesis. | No discussion is included in the research paper.  Discussion is unclear. |
| **Conclusion…..**Of the entire paper, a summary of everything learned (research, experiment, results, & discussion) | Meets page limitation. This is a **clear summary of the results obtained**. The question is restated. **There is a connection to the hypothesi**s, proved or disproved. An answer to the question is provided based upon results. There is a clear understanding of the project and results. | Meets page limitation. **This is a summary of the results obtained**. The question is restated. There is a connection to the hypothesis stating if it was proved or disproved. **There is no answer to the scientific question.** There appears to be some understanding of the projects and results obtained. | This is less than one page, **only one to two paragraphs.** Information is included about the project. No question is restated. **There is no connection to the hypothesis.** An overall answer to the scientific question is not provided.  There appears to be little understanding of the project and results obtained. | There is no conclusion provided in the research paper.  The conclusion is unclear. There appears to be no understanding of the project and results obtained. |
| **Bibliography** | 5 different sources are listed (3 for grades 3 & 4). All sources have additional information provided as it applies; dates, publishers, copy write date, web address, and page numbers. | 5 different sources are listed. There is partial information provided for 3 to 4 of the sources. This information includes dates, publishers, copy write date, web address, and page numbers. | Sources are provided. These sources are all one type, (book, web) ***or*** there are less than 3 sources provided. Partial information is provided; dates, publishers, copy write date, web address. | No bibliography page is included.  Only the name of the sources used is listed. |

Total Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Grade: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_