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|  | **Proficient (100%)** | **Developing (84%)** | **Novice (70%)** | **Not addressed (0%)** |
| **Title Page (5%)** | Includes experiment name and/or title that describes lab concisely, adequately, and appropriately; students name; date and time experiment performed; location if work was performed in the field; course name and section. | Includes only 3-4 of the 5 required items and/or the title describes the lab, but with inadequate detail or unnecessary verbosity. | Includes on 1-2 of the 5 required items and/or title is only slightly related to the lab. | Section is not included and/or is missing completely. |
| **Section 1: Abstract (10%)** | Conveys a sense of the full report concisely and effectively. | Conveys a sense of the full report, but with inadequate detail or unnecessary verbosity. | Abstract is missing or only slightly related to the lab. | Abstract is not included and/or is missing completely. |
| **Section 2: Introduction and Background (15%)** | Concisely and completely describes the purpose of the experiment, clear hypothesis, background info based on research and relevant references to primary sources, and any necessary or required photos, drawings, diagrams, and graphics. Student includes all items included in the directions within the specific course. | One (1) piece of required information is missing completely from this section OR the background information or hypothesis provided lacks detail or ineffectively describes the scope of the experiment. | One to two (1-2) pieces of required information are missing completely OR the Introduction and hypothesis lack detail and fail to state the purpose of the experiment or describe a hypothesis. | More than 2 pieces of required information is missing OR the Introduction section is missing completely. |
| **Section 3: Materials and Methods (10%)** | Clearly lists all necessary materials, equipment, and amounts. Method is written in paragraph form and describes enough detail about the procedure and laboratory techniques that it can be replicated. | Materials are mentioned but without amounts or with at least one missing item. Method is written in paragraph form and includes steps for conducting the experiment, but are written in such a way that some additional research or inference is required to replicate the procedure. | Materials list is missing two (2) or more items and/or information provided in this section doesn’t provide enough information to replicate the experiment OR methods is included in such a way that the experiment can be replicated, but is not written in paragraph form. | Materials and Methods section is missing completely. |
| **Section 4: Results (15%)** | Section is written in narrative (paragraph) form. All collected experimental data are recorded, relevant, accurate, and comprehensive. Includes calculations, observations, measurements, etc. Reader can fully evaluate validity of writer’s conclusions and assumptions. Data may be synthesized or manipulated in a novel way to provide insight. Data tables include units and descriptions. Graphs, if present, are of an appropriate format or graph type and are labeled and show trends. | All collected experimental data are included, but data tables are missing units and/or descriptions and/or section is not written in narrative (paragraph) form. Calculations required to complete the experiment are missing from the report or the presentation of data is in an inappropriate format or graph type. Reader cannot fully evaluate validity of the writer’s conclusions and assumptions. | Collected experimental data are incomplete. Data tables and/or graphs are missing data. Data are not presented in a way that allows the reader to understand the experiment and the writer’s conclusions and assumptions. | Data section is missing altogether or is presented in a manner that is incomprehensible and/or disorganized. |
| **Section 5: Discussion (25%)** | Discussion summarizes experiment, addresses hypothesis, and explains what was expected and what was found in paragraph form. Presents reasons for the results obtained and references relevant studies (unless specifically told to not use peer-reviewed articles by instructor). Cites data and presents clearly-written conclusions that are comprehensive, persuasive, and justified by the data collected. Cites data and cites sources of error. Addresses and logically refutes or explains conflicting data. Offers recommendations that might improve the procedure and results. | Discussion summarizes experiment and addresses hypothesis while making clear connections between the data and the conclusions. However, data or sources of error not cited OR conflicting data not addressed or explained OR recommendations that might improve the procedure and results are not included. | Discussion has some justification from the provided data, but may be overly broad or contain some gaps in data or logic. Connections between hypothesis, data, and conclusions are weak. Data and/or sources of error are not cited. Conflicting data not addressed or explained. | Discussion is missing OR has little or no justification from data provided. Connections between hypothesis, data, and conclusions are non-existent, limited, vague, or otherwise insufficient to allow reasonable evaluation of their merit. Conflicting data not addressed or explained. |
| **Section 6: Conclusion (10%)** | Conclusion summarizes experiment in one paragraph. Cites data and presents clearly-written conclusions that are comprehensive, persuasive, and justified by at least 3 pieces of evidence from the data collected. | Conclusion summarizes experiment in one paragraph while making clear connections between the data and the conclusions. However, only 2 pieces of evidence (reasons and/or data) to support the conclusion are provided. | Conclusion not summarized in one paragraph and/or only 1 piece of evidence (reason or data) is provided to support the conclusion. | Conclusion is not supported with evidence (reasons or data) from experiment or section is missing completely. Conclusions are non-existent, limited, vague, or otherwise insufficient to allow reasonable evaluation of their merit. |
| **Section 7: Citations and Presentation (10%)** | Relevant citations are included and follow AMA style; format of tables and figures are appropriate; grammar and spelling are correct; sections are written in paragraph form with almost no grammatical errors. | Incorrect citation style; tables and figures are sometimes unclear; spelling and grammar errors are present but don’t negatively impact overall readability or meaning. | Some missing citations; tables and figures are disorganized; extensive grammar and spelling errors impact readability and meaning. | No citations included; grammar and spelling errors make reading and comprehension extremely difficult; no (or very little) attention to detail is evident. |