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| Category | Sub –category | 3 | 2 | 1 |
| Title |  | The title clearly describes the nature of the lab. | Accurate and Present | Present, but not correct |
| Introduction | Purpose | The purpose of the lab or the question to be answered during the lab is clearly identified and stated in a statement or two. | The purpose of the lab or the question to be answered during the lab is identified, but is stated in a somewhat unclear manner. | The purpose of the lab or the question to be answered during the lab is partially identified and is stated in a somewhat unclear matter. |
|  | Hypothesis | Hypothesized relationship between the variables and the predicted results is clear and reasonable based on what has been studied. An “if/then” sentence begins the hypothesis. | Hypothesized relationship between the variables and the predicted results is reasonable based on general knowledge and observations. An “if/then” sentence begins the hypothesis. | Hypothesized relationship between the variables and the predicted results has been stated, but appears to be based on flawed logic, or there is no “if/then” sentence. |
|  | Background | Several reputable background sources were used and cited correctly. Topics discussed in class and in the book are correctly used. Material is translated into students own words. Anything measured, or any math used needs to be discussed. | A few reputable background sources are used and cited correctly. Material is translated into student’s own words. Anything measured, or any math needs to be discussed. | A few reputable background sources are used but material is not in student’s own words. Anything measured, or math is not discussed. |
| Materials | List | All materials, chemicals and equipment are clearly and accurately listed in bullet form, with boxes to check off. The physical properties of the chemicals are included. | Almost all materials and the setup used in the experiment are clearly and accurately described. | Materials are described inaccurately or are not described at all. Check off boxes are missing. |
|  | Safety | Lab is carried out with full attention to relevant safety procedures. All safety and hazard warnings are listed. | Lab is generally carried out with attention to relevant safety procedures. Most safety and hazard warnings are listed. | Safety procedures were ignored or only partially addressed. |
| Procedure | Steps | Procedures are listed in clear steps. Each step is numbered, with a box to check, and is accompanied by a sketch and brief explanation of what is to be done. Clean up is included. | Procedures are listed in a logical order, but steps are not numbered and/or are missing sketches and clear explanation. | Procedures are listed but are not in a logical order or are difficult to follow. |
|  | Drawings/diagrams | Clear, accurate diagrams are included and make the experiment easier to understand. Diagrams are labeled neatly and accurately. | Diagrams are included and are labeled neatly and accurately. | Some diagrams are missing or they are missing important labels. |
| Data & Calculations | Data Tables | Professional looking and accurate representation of the data in tables and/or graphs. Graphs and tables are labeled and titled, and include units. Data tables have a descriptive sentence. | Accurate representation of the data in tables and/or graphs. Some labels or the descriptive sentence may be missing. | Accurate representation of the data in written form, but no graphs or tables are presented. |
|  | Calculations | All calculations are shown and the results are correct and labeled appropriately. | Some calculations are shown and the results are correct and labeled appropriately. | Some calculations are shown and there are missing labels. |
|  | Observations | Detailed observations are listed. | Observations are present but not detailed. | Observations are present, but are not relevant or complete. |
| Discussion | Discussion | Discussion of expected results vs. what really happened is presented in complete coherent sentences. Personal feelings and pronouns are not included. | Discussion of expected results vs. what really happened is presented, but difficult to follow. Personal feelings and pronouns are not included. | Discussion of expected results vs. what really happened is presented, but difficult to follow. Personal feelings and/or pronouns are used. |
|  | Error analysis | Experimental errors, their possible effects, and ways to reduce errors are discussed. Errors are identified as avoidable or unavoidable. Percent error calculations are included where appropriate (if the correct answer is available for comparison). | Experimental errors and their possible effects are discussed. Percent error calculations are included where appropriate. | Experimental errors are mentioned. |
|  | Further Study | Possible further study is identified and justified. This is presented as a different experiment (not redoing this lab better). | Possible further study is identified and appropriate. | Possible further study is identified. |
| Conclusion |  | Conclusion includes whether the finding supported or refuted the hypothesis and if the question was answered or purpose accomplished. | Conclusion includes whether the finding supported the hypothesis and what was learned from the experiment. | Conclusion includes what was learned from the experiment. |
| Spelling, Punctuation and Grammar |  | One or fewer errors in spelling, punctuation and grammar in the report. The report includes no first person. | Two or three errors in spelling, punctuation and grammar in the report. The report includes no first person. | Four or more errors in spelling, punctuation and grammar in the report. The report includes first person. |
| Post Lab Questions |  | Completed and correct. | Completed with one or two mistakes. | Completed with more than two mistakes. |