Physics Lab Reports

1. Objective
   * Defines the purpose of the lab.
2. Materials & Procedures
   * Explanation of what the student did to achieve their results.
   * Explains the materials used in the procedures, either in a separate section or in the procedures themselves.
   * Detailed enough that the experiment can be replicated by an outside source.
3. Data
   * Section contains ONLY data and observations the student recorded
   * Graphs, data tables belong here
   * Also contains objective written summary of data observed (3+ sentences)
     1. Ex: The candle was placed at 30cm and moved 10cm further away each trial. Also includes definitions of what each column in the data table represents.
4. Conclusions
   * Lab questions are answered here
   * Contains what the student discovered
   * Explains results and what they mean
     1. Data trends (or lack there of)
     2. Relates to in-class knowledge
   * Discusses assumptions made during the lab
   * Discusses the validity of the data.
   * Discuss improvements for next time to combat errors you encountered
   * Discusses relevance and/or uses and/or application of the data and/or technique and why it matters.

\*Remember, you are being graded on how accurately you present the science you did, not the results you got. A well-written lab report with bad data (which is explained) is better than a poorly done lab report with good data.

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|  | 5 | 3 | 1 | 0 | Points Received |
| Objective Statement | Objective statement is clear, concise and explains the purpose of the lab | Objective statement is poorly worded or does not sufficiently explain the purpose of the lab | Objective statement is unrelated to the lab. | Objective statement is missing or illegible. | \_\_\_\_/5 |
| Procedures & Materials | Procedures and materials are detailed and accurate enough that the lab can be performed by an outsider. | Procedures and materials are accurate but may be vague or missing pieces. | Procedures and materials are incorrect or very vague. | Procedures and materials are missing or illegible | \_\_\_/10 |
| Data | Data presents all information the student discovered during the lab. Data is presented in appropriate tables and graphs and summarized with text. | Data presents most information the student discovered. Graphs or tables may be unclear or inappropriate, or summarizing text may be missing. Conclusions may be mistakenly included. | Data presents some information the student discovered. Graphs or tables are sloppy, unclear, and inappropriate. Summarizing text is missing. | Data is missing or illegible | \_\_\_/15 |
| Conclusions | What the student discovered during the lab is expressed clearly. All assumptions made during the lab are stated. A discussion of the validity of the data is included. Relevance/implications/ applications of the data are completely explained | What the student discovered during the lab is expressed, but some parts may be missing or incomplete. A discussion of the validity of the data is included but short/incorrect. An attempt at expressing the relevance/implications/ applications of the data is made. | What the student discovered during the lab is incomplete or incorrect. A discussion of validity or assumptions is missing or incorrect. No attempt at expressing the relevance of the data. | Conclusions are missing or illegible. | \_\_\_/20 |

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