

Aspects					
I.	II.	III.	IV.	V.	VI.
Research Question	Experimental Design	Data & Processing	Graphs & Patterns	Analysis & Conclusion	Evaluation & Improvements

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| <p>a. Is a clearly stated question that can be answered with relevant data.</p> <p>(depending on the lab, b and c may not apply)</p> <p>b. States the independent, dependent, and controlled variables.</p> <p>c. States the theory used to find the measured quantity and shows the graph used to find the measured property.</p> | <p>a. Communicates a method of collecting data that allows for another scientist to recreate the experiment.</p> <p>b. Allows for the collection of high-quality, sufficient data to answer the research question.</p> | <p>a. Record appropriate qualitative data.</p> <p>b. Table headings state measurement, correct units, and appropriate, estimated uncertainties with explanation.</p> <p>c. Uncertainties are given to one significant figure only and the data is consistent with this uncertainty.</p> <p>d. All calculated data columns display the formula used for calculation.</p> | <p><i>Graphs may or may not be needed for a given measurement lab.</i></p> <p>a. All axes labeled with measurement and units.</p> <p>b. Data points are plotted accurately with error bars.</p> <p>c. Best-fit line is drawn and stated mathematically near the graph.</p> <p>d. Separate graph with best-fit, max and min lines</p> | <p>a. References the data collected to answer the original research question.</p> <p>b. Expresses final answer to research question with uncertainties.</p> <p>c. References applicable theory to support calculated values.</p> <p>d. Explains an appropriate level of confidence in the conclusion.</p> <p>e. Calculated physical quantities are compared with referenced accepted values, where appropriate.</p> | <p>a. Comments on the overall 'quality' of the procedure used and data collected, using evidence from the processed data.</p> <p>b. Significant weaknesses and limitations in the procedure and equipment are identified and evaluated for causing any systematic or random uncertainty.</p> <p>c. Identified weaknesses and limitations are addressed. Specifically including exact and realistic improvements to reduce uncertainties or improve confidence.</p> |
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