Peer Edit for Exploration / Analysis (New IA 2017)

Author Name: _____ (full name)
Editor Name: _____ (full name)

What is the research question for this lab? Please write it here:
_____
_____

Exploration

This criterion assesses the extent to which the student establishes the scientific context for the work, states a clear and focused research question and uses concepts and techniques appropriate to the Diploma Programme level. Where appropriate, this criterion also assesses awareness of safety, environmental, and ethical considerations.

Mark	Descriptor
0	The student's report does not reach a standard described by the descriptors below.
1–2	The topic of the investigation is identified and a research question of some relevance is **stated but it is not focused**. The background information provided for the investigation is **superficial** or of limited relevance and does not aid the understanding of the context of the investigation. The methodology of the investigation is only appropriate to address the research question to a very limited extent since it takes into consideration few of the significant factors that may influence the relevance, reliability and sufficiency of the collected data. The report shows evidence of limited awareness of the significant safety, ethical or environmental issues that are **relevant to the methodology of the investigation***.
3–4	The topic of the investigation is identified and a relevant but not fully focused research question is described. The background information provided for the investigation is mainly appropriate and relevant and aids the understanding of the context of the investigation. The methodology of the investigation is mainly appropriate to address the research question but has limitations since it takes into consideration only some of the significant factors that may influence the relevance, reliability and sufficiency of the collected data. The report shows evidence of some awareness of the significant safety, ethical or environmental issues that are **relevant to the methodology of the investigation***.
5–6	The topic of the investigation is identified and a relevant and fully focused research question is clearly described. The background information provided for the investigation is entirely appropriate and relevant and enhances the understanding of the context of the investigation. The methodology of the investigation is highly appropriate to address the research question because it takes into consideration all, or nearly all, of the significant factors that may influence the relevance, reliability and sufficiency of the collected data. The report shows evidence of full awareness of the significant safety, ethical or environmental issues that are **relevant to the methodology of the investigation***.

What grade (out of 6) would you give just the EXPLORATION section (best fit approach) of this lab? _____

Analysis

This criterion assesses the extent to which the student's report provides evidence that the student has selected, recorded, processed and **interpreted** the data in ways that are relevant to the research question and can support a conclusion.

Mark	Descriptor
0	The student's report does not reach a standard described by the descriptors below.
1–2	The report includes **insufficient relevant** raw data to support a valid conclusion to the research question. Some **basic** data processing is carried out but is either too **inaccurate or too insufficient to lead to a valid** conclusion. The report shows evidence of little consideration of the impact of measurement uncertainty on the analysis. The processed data is incorrectly or insufficiently interpreted so that the conclusion is invalid or very incomplete.
3–4	The report includes relevant but incomplete quantitative and qualitative raw data that could support a simple or partially valid conclusion to the research question. Appropriate and sufficient data processing is carried out that could lead to a broadly valid conclusion but there are significant inaccuracies and inconsistencies in the processing. The report shows evidence of some consideration of the impact of measurement uncertainty on the analysis. The processed data is interpreted so that a broadly valid but incomplete or limited conclusion to the research question can be deduced.
5–6	The report includes sufficient relevant quantitative and qualitative raw data that could support a detailed and valid conclusion to the research question. Appropriate and sufficient data processing is carried out with **the accuracy** required to enable a conclusion to the research question to be drawn that is fully **consistent** with the experimental data. The report shows evidence of full and appropriate consideration of the impact of measurement uncertainty on the analysis. The processed data is correctly interpreted so that a completely valid and detailed conclusion to the research question can be deduced.

What grade (out of 6) would you give just the ANALYSIS section (best fit approach) of this lab? _____

Based on the rubric above, write comments to the author. Try to provide detailed suggestions regarding:

a. RESEARCH QUESTION (Focused? Clear? IB level?)

b. BACKGROUND INFORMATION (Relevant? Shows physics knowledge? Anything beyond SL? Citations?

c. METHODOLOGY (Detailed enough to be repeatable? Good work to make trials consistent with control variables? Sufficient data? Relevant safety / ethical issues addressed?)

d. DATA (Qualitative / Qualitative data appropriate RQ, Trials show consistency and precision? Uncertainties complete and present in both raw and processed?

e. GRAPHS (Reveal trends? Meaningful Slope? Error bars appropriate? Max and min lines appropriate?)

At the end of reading the report, answer the following questions.

      a. Do you understand what the data shows?   Yes   Somewhat   No   (circle one)

      b. Is there a clearer way to present this data?   Yes   No   (circle one)

      Suggestions:

      c. Does the processed data answer the research Question?   Yes   Somewhat   No

      Explain:

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a. RESEARCH QUESTION (Focused? Clear? IB level?)

b. BACKGROUND INFORMATION (Relevant? Shows physics knowledge? Anything beyond SL? Citations?)

c. METHODOLOGY (Detailed enough to be repeatable? Good work to make trials consistent with control variables? Sufficient data? Relevant safety / ethical issues addressed?)

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      b. Is there a clearer way to present this data?   Yes   No   (circle one)

      Suggestions:

      c. Does the processed data answer the research Question?   Yes   Somewhat   No

      Explain: