

MARKING CRITERIA RUBRIC

INTERMEDIATE EXPERIMENTAL RESEARCH SECTION

1. ABSTRACT	(1) The abstract is not clearly written and has minimal relevance to the research.	(2) The abstract is clearly written and is a concise summary of the research		
2. INTRODUCTION	(1-2) The introduction has minimal science content relevant to the research and outlines few reasons as to why the research was done.	(3-4) The introduction outlines the science ideas relevant to the research (background information), places the project in context, and clearly states the reasons as to why the research was done. Defines key terms. Is properly referenced.		
3. AIM (INCLUDING HYPOTHESIS)	(1) The aim of the experiment is not clear and no hypothesis is suggested	(2) Aim of the experiment is stated with a hypothesis but either the aim or the hypothesis is not clear or relevant.	(3) Aim of the experiment is clearly stated with a testable hypothesis and scientific reasoning to justify it.	
4. MATERIALS & METHODS (INCLUDING RISK ASSESSMENT)	(1) Method is confusing and incomplete, with poorly labelled and/or inappropriate diagrams and insufficient information to replicate the experiment by a third party. Poor safety considerations. Risk Assessment not included.	(2) Method is incomplete with poorly labelled and/or inappropriate diagrams. A third party would have difficulty replicating the experiment on the information provided. Limited Risk Assessment.	(3) Method is clearly written, with appropriately labelled diagrams and information so that the experiment could be replicated by a third person. All materials used are recorded. Adequate Risk Assessment included.	(4) Method is clearly written, third person and past tense, with appropriate labelled diagrams and information so that the experiment could be easily and precisely replicated by a third person. All materials used are recorded in detail. Extensive and thorough Risk Assessment included.
5. EXPERIMENTAL DESIGN	(1-3) Five or more aspects of the experimental design are missing or poorly implemented.	(4-5) Three or four aspects of the experimental design are missing or poorly implemented.	(6-7) The experiment <ul style="list-style-type: none"> ♦tests the hypothesis. ♦includes steps to minimise errors ♦has adequate repeats to reduce random errors (e.g. N = 3) ♦includes experimental controls 	<ul style="list-style-type: none"> ♦tests one variable at a time ♦is logically and elegantly designed ♦collects relevant results in an appropriate way ♦shows effort and ingenuity in planning and execution
6. RESULTS	(1-2) Results are not presented in an easily understood format and not clearly labeled. Values are recorded with inappropriate significant figures and subjective results have been used. Poorly drawn tables, and graphs that do not show the trends in the data. Axes poorly labeled.	(3-4) Results have been presented with graphs or other appropriate manner but there are still numerous significant aspects missing, such as: clear headings, appropriate units, labelled axes, correct significant figures etc. Subjective results have been used. Trends are not made clear in the data or graphs	(5-6) Results have been presented with graphs or other appropriate manner with few significant aspects missing, such as: clear headings, appropriate units, labelled axes, correct significant figures etc. Subjective results have not been used. Trends have been made clear.	(7) Results are recorded in table/graph/diagram formats where appropriate in an easy-to-follow format with clear headings, titles, axes, units, and trendlines. No significant aspects are missing. Values are recorded with appropriate significant figures. Subjective results have not been used. Trends have been made clear.
7. DISCUSSION	(1) The discussion includes a statement of the results with minimal analysis of its significance or validity. The examination of errors or how the experiment could be improved is missing.	(2-4) The discussion has a brief analysis of the results including some implications. A statement of whether the hypothesis was supported or not is included. Suggestions have been made on how the experiment could be improved to obtain more meaningful results and/or less error. A brief investigation of the problems encountered and how they were dealt with is included.	(5-7) The discussion includes a detailed analysis of the results including the implications and validity of the results. Good suggestions have been made on how the experiment could be improved to obtain more meaningful results and less error. A thorough investigation of the problems encountered and how they were dealt with is included. Future investigations are suggested.	
8. CONCLUSION	(1-2) Conclusion is a restatement of the results or that the aim has been met.	(3) Conclusion clearly & concisely outlines the significant findings of the research as related to the aim & hypothesis. A statement of whether the hypothesis was supported or not is included.		
9. ACKNOWLEDGMENTS & REFERENCES	(1) References do not follow the guidelines outlined by STS (page 23 of handbook)	(2) References follow guidelines outlined by STS (page 23 of handbook)	(3) References, from multiple sources, follow guidelines outlined by STS (page 23 of handbook). Full acknowledgement included.	
10. PRESENTATION & NEATNESS	(1-2) Not presented in a well laid out format and the report is difficult to follow and read. Inconsistency in headings and fonts etc.	(3) Not presented in a well laid out format or the report is difficult to follow and/or read. Largely consistent headings and font.	(4-5) Presented in a well laid out and consistent format that is easy to follow and read.	
11. ORIGINALITY & CREATIVITY	(1-2) A common experiment obtaining predictable results.	(3-4) Some attempt has been made to modify a common experiment.	(5) An original or innovative experiment, an interesting variation on an experiment and/or a creative method for obtaining data.	

Total score is out of 50:

Major Bursary (A) = 45 and above

Minor Bursary (B) = 40 – 45

Distinction (D) = 35 – 40

Merit (M) = 26 – 35

*These are recommended scores for bursary awards and cannot guarantee an outcome. Results are based on further moderation and available bursaries for each year.