

Semester Two Grade 11 EE Specific Criteria (Mathematics)

Grade	Criteria
A	<p>Literature Review includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> An annotated bibliography recording responses to what has been read in their researcher's reflection space (RRS). <input type="checkbox"/> Evidence of the use of specialized academic search engines to find resources appropriate for citation in the EE. <input type="checkbox"/> A demonstration of the student's knowledge and understanding of the mathematics they are using in the context of the broader discipline, for example how the mathematics they are using has been applied before, or in a different area to the one they are investigating. <p>Title:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is in the form of a question which can by itself clearly describe the topic and/or aim of the essay. <p>The draft extended essay introduction includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A clear, concise, appropriate, coherent indication of the mathematical areas and the techniques that will be the focus of the research topic. <input type="checkbox"/> A clear, coherent, focused research question that addresses an issue of research. <input type="checkbox"/> A short discussion of the purpose of undertaking the task <input type="checkbox"/> A description of the scope/breadth of the research including a concrete description of the mathematical methods used to investigate the question. <p>The draft extended essay body includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A concise, well-structured analysis which includes a focused, deductively reasoned mathematical argument developed from range of sources and research that clearly addresses the research question. <input type="checkbox"/> Evidence of a range of relevant source(s) and/or methods that have been applied in relation to the topic and research question including an explanation of how the mathematics works and all the steps involved including where appropriate, relevant graphs, diagrams and proven conjectures that can be proved readily <input type="checkbox"/> Conclusions to individual points of analysis effectively supported by the mathematical reasoning. <input type="checkbox"/> The use of subject-specific terminology, definitions, symbols, theorems, graphs & diagrams and concepts that is accurate, consistent and relevant. <p>The structure and layout of the essay:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A section and sub-section structure to their essays is provided, with appropriate informative headings. <input type="checkbox"/> Concise, elegant mathematics supported by graphs, diagrams and important proofs that do not interrupt the development of the essay. <input type="checkbox"/> Charts, images and tables, diagrams and pictures are embedded in the text, immediately close to an explanation of them. <input type="checkbox"/> Small data tables are included in the body of the essay but larger ones appear as an appendix, with means, standard deviations, correlation coefficients etc given in the text. <input type="checkbox"/> A bibliography presented in a standard format. Title page, table of contents, page numbers, etc must contribute to the quality of presentation. <p>Engagement is evidenced by:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Evaluative and frequent written and oral reflections on decision-making and planning, including reference to the student's capacity to consider actions and ideas in response to setbacks experienced in the research process. <input type="checkbox"/> Journal entries that communicate a high degree of intellectual and personal engagement with the research focus and process of research, demonstrating authenticity, intellectual initiative and/or creative approach in the student voice.

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B	<p>Literature Review includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> An annotated bibliography recording responses to what has been read in their researcher's reflection space (RRS). <input type="checkbox"/> Evidence of the use of specialized academic search engines to find resources appropriate for citation in the EE. <p>The draft extended essay introduction includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A clear, coherent statement about the focus of the research topic*. <input type="checkbox"/> A clear, coherent research question* that addresses an issue of research. <input type="checkbox"/> A short discussion of the purpose of undertaking the task <input type="checkbox"/> A description of the scope/breadth of the research <p>The final extended essay body includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A detailed analysis which includes reasoned arguments developed from range of sources and research that connect to the research question; the inclusion of less relevant research rarely detracts from the quality of the overall analysis. This reasoned argument is clearly structured and coherent and supported by a final or summative conclusion; minor inconsistencies may hinder the strength of the overall argument. <input type="checkbox"/> Evidence of a range of generally relevant source(s) and/or methods that have been applied in relation to the topic and research question. <input type="checkbox"/> Conclusions to individual points of analysis supported by the evidence but may contain some minor inconsistencies. <input type="checkbox"/> Sources used to demonstrate understanding. <input type="checkbox"/> The use of subject-specific terminology and concepts that is mostly accurate, consistent and relevant. <p>The structure and layout of the essay:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Include expected conventions for the topic, argument and subject in which the essay is registered. See exemplar <input type="checkbox"/> Support the reading, understanding or evaluation of the extended essay. See exemplar. <p>Engagement is evidenced by:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Analytical and frequent written and oral reflections on decision-making and planning, including reference to the student's capacity to conceptual understanding and skill development. <input type="checkbox"/> Journal entries that communicate a high degree of personal engagement with the research focus and process of research, demonstrating some intellectual initiative.

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C	<p>The final extended essay introduction includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A coherent statement about the focus of the research topic*. <input type="checkbox"/> A coherent research question* that addresses an issue of research. <input type="checkbox"/> A short discussion of the purpose of undertaking the task <input type="checkbox"/> A description of the scope/breadth of the research <p>The final extended essay body includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> An analysis which includes reasoned arguments developed from range of sources and research are partially relevant to the research question; irrelevant research detracts from the quality of the argument <input type="checkbox"/> Evidence of a range of source(s) and/or methods that have been applied in relation to the topic and research question. <input type="checkbox"/> A final or summative conclusion, only partially consistent with the arguments/evidence presented. <input type="checkbox"/> Sources used to demonstrate understanding. <input type="checkbox"/> The use of subject-specific terminology and concepts that is mostly accurate, consistent and relevant. <p>The structure and layout of the essay:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Include expected conventions for the topic, argument and subject in which the essay is registered. See exemplar <input type="checkbox"/> Some layout considerations may be missing or applied incorrectly. <p>Engagement is evidenced by:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Analytical, written and oral reflections on decision-making and planning, including reference to the student's capacity to conceptual understanding and skill development. <input type="checkbox"/> Journal entries that communicate a moderate degree of personal engagement with the research focus and process of research, demonstrating some intellectual initiative.

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D	<p>Incomplete draft</p> <ul style="list-style-type: none"> Topic or area of research has been identified Limited research has been conducted and documented The research question requires refinement Simple outline has been submitted Engagement with the process has been limited Journal entries that are limited, superficial or infrequent

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E (failing grade; no credit towards NIS High School Diploma)	<p>No draft submitted</p> <ul style="list-style-type: none"> Topic or area of research is unclear The research question is ineffective or inappropriate No research has been undertaken No outline has been completed There is no evidence of engagement with the process. No journal entries