

Millbrook Extended Essay



Student Handbook

Millbrook High School

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Introduction to the Extended Essay

Nature of the extended essay

The extended essay is an in-depth study of a focused topic chosen from the list of approved Diploma Programme subjects—normally one of the student’s six chosen subjects for the IB diploma. It is intended to promote high-level research and writing skills, intellectual discovery and creativity. It provides students with an opportunity to engage in personal research in a topic of their own choice, under the guidance of a supervisor (a teacher in the school). This leads to a major piece of formally presented, structured writing, in which ideas and findings are communicated in a reasoned and coherent manner, appropriate to the subject chosen. The completion of the written essay is followed by a short, concluding interview, or *viva voce*, with the supervisor.

All extended essays are assessed using the same general criteria, while a subject-specific interpretation is used to inform the student and grader regarding how the general criteria apply to different subjects.

The extended essay is:

- compulsory for all Diploma Programme students
- externally assessed and, in combination with the grade for theory of knowledge, contributes up to three points to the total score for the IB diploma
- a piece of independent research/investigation on a topic chosen by the student in cooperation with a supervisor in the school
- chosen from the list of approved Diploma Programme subjects, published in the *Handbook of procedures for the Diploma Programme*
- presented as a formal piece of scholarship containing no more than 4,000 words
- the result of approximately 40 hours of work by the student
- concluded with a short interview, or *viva voce*, with the supervising teacher

In the Diploma Programme, the extended essay is the prime example of a piece of work where the student has the opportunity to show knowledge, understanding and enthusiasm about a topic of his or her choice. In circumstances where college admissions interviews are conducted prior to acceptance for university admission, the extended essay has often proved to be a valuable stimulus for discussion.

Prior learning

The extended essay is a unique task for all DP students. Whilst no particular background is needed as a formal requirement for undertaking the extended essay, students are strongly recommended to carry out research in a subject area they are currently studying in the Diploma Programme to ensure that they have sufficient subject knowledge to complete the task. For those students completing a world studies extended essay it is also strongly recommended that they are undertaking a course of study in at least one of the subjects chosen for their essay. A familiarity with research methods would be an advantage.

The extended essay and the IB learner profile

The learning involved in researching and writing the extended essay is closely aligned with the development of many of the characteristics described in the IB learner profile. Students are, to a large extent, responsible for their own independent learning, through which they acquire and communicate in-depth knowledge and understanding. The research process necessarily involves intellectual risk-taking and extensive reflection; open-mindedness, balance and fairness are key prerequisites for a good extended essay.



This information was taken from the Extended Essay Guide located in the Online Curriculum Centre at ibo.org.

Roles and Responsibilities

Student Responsibilities

Students are required to:

- Choose a topic from an appropriate subject
- Follow EE regulations
- Meet Deadlines
- Meet all basic requirements
- Cite sources appropriately
- Participate in Viva Voce

Students are strongly encouraged to:

- Beginning early and work consistently with schedule in mind
- Choosing an area of personal interest
- Pay close attention to the research question throughout process
- Keep an accumulative source list
- Proofread the final version carefully

School Responsibility

- Provide parents and students with the necessary extended essay requirements and regulations
- Provide an EE timeline to allow for structure of the process.
- Provide an informed supervisor to the student.
- Provide support for the supervisors.

Supervisor Responsibility

- Help shape choice of topic and research question.
- Advise on ethical standards, integrity, and content.
- Give general feedback during different stages of the process: researching, locating sources, etc.
- Read and give feedback on one draft of the extended essay
- Read final submission and conduct Viva Voce.
- Verify student response on Reflection on Planning and Progress Form (RPPF)

What Extended Essay Supervisors are NOT responsible for...

- Supervisors Do NOT edit the paper for grammar/mechanics.
- Supervisors Do NOT find the student if the student misses an advising meetings.
- Supervisors Do NOT substantially change the student's writing.
- Supervisors Do NOT continually create edits on successive drafts.
- Supervisors Do NOT do the student's research for them.

Extended Essays Assessment

IB offers a detailed guide for assessing the work of each student, formally referred to as the “Extended Essay Assessment Criteria.” A copy appears in this manual on the next pages. The rubric prescribes a number of points that can be awarded to the student in five different areas. This guide helps standardize the grades given to students. Students may earn a total of 34 points.

A = Work is an **excellent** standard

B = Work is a **good** standard

C = Work is a **satisfactory** standard

D = Work is a **mediocre** standard

E = Work is an **elementary** standard

This is the same rubric that is applied to essays submitted to teachers worldwide. Graders will also use assessment guidelines delineated by the Extended Essay Guide that gives descriptions specific to the topic selected. Students will have a copy of each of these sets of guidelines or criteria that correspond to the 5 areas listed on the rubric. This assists students in completing their essays so as to best meet IB standards for the essay.

SCORING AND THE RUBRICS

The EE is marked using a General Rubric that is found in the Extended Essay Guide. The General Rubric is informed by the Subject (content) Specific guidelines that are also in the EE guide. Students and supervisors should be referencing both as the EE process unfolds; as it is critical that an essay follows the expectations of the subject in which it is registered (*Interpreting the EE Assessment Criteria*). An essay can be excellent, but score low if it does not meet the criteria of the discipline in which it is registered.

Below are some pointers about the rubrics. Supervisors and students should refer to the EE guide for further information about these rubrics.

1. There are two types of guidance to follow:
 - a. General Criteria
 - b. Interpreting the EE Assessment Criteria
2. General Criteria:
 - a. The general rubric is used to score the students’ EE on a number scale, 34 being the highest score.
 - b. The grader will use this to score the student.
3. Subject Specific Interpretations:
 - a. The subject specific criteria interpretation does not have a number scale, but is used to justify reasoning for scores on the general rubric.
 - b. Students can use the subject specific criteria interpretation to help them create an EE that is on point with the general criteria requirements.

Extended Essay Assessment Criteria

A: Focus and Method:

This criterion focuses on the topic, the research question and the methodology. It assesses the explanation of the focus of the research (this includes the topic and the research question), how the research will be undertaken, and how the focus is maintained throughout the essay.

Level	Descriptor
0	<i>The work does not reach a standard outlined by the descriptors below</i>
1-2	<p><i>The topic is communicated unclearly and incompletely.</i></p> <ul style="list-style-type: none"> ● Identification and explanation of the topic is limited; the purpose and focus of the research is unclear, or does not lend itself to a systematic investigation in the subject for which it is registered. The research question is stated but not clearly expressed or too broad. ● The research question is too broad in scope to be treated effectively within the word limit and requirements of the task, or does not lend itself to a systematic investigation in the subject for which it is registered. ● The intent of the research question is understood but has not been clearly expressed and/or the discussion of the essay is not focused on the research question. Methodology of the research is limited. ● The source(s) and/or method(s) to be used are limited in range given the topic and research question. ● There is limited evidence that their selection was informed.
3-4	<p><i>The topic is communicated.</i></p> <ul style="list-style-type: none"> ● Identification and explanation of the research topic is communicated; the purpose and focus of the research is adequately clear, but only partially appropriate. The research question is clearly stated but only partially focused. ● The research question is clear but the discussion in the essay is only partially focused and connected to the research question. Methodology of the research is mostly complete. ● Source(s) and/or method(s) to be used are generally relevant and appropriate given the topic and research question. ● There is some evidence that their selection(s) was informed. If the topic or research question is deemed inappropriate for the subject in which the essay is registered no more than four marks can be awarded for this criterion.
5-6	<p><i>The topic is communicated accurately and effectively.</i></p> <ul style="list-style-type: none"> ● Identification and explanation of the research topic is effectively communicated; the purpose and focus of the research is clear and appropriate. The research question is clearly stated and focused. ● The research question is clear and addresses an issue of research that is appropriately connected to the discussion in the essay. Methodology of the research is complete. ● An appropriate range of relevant source(s) and/or method(s) have been applied in relation to the topic and research question. ● There is evidence of effective and informed selection of sources and/or methods.

B: Knowledge and Understanding:

This criterion assesses the extent to which the research relates to the subject area/discipline used to explore the research question, or in the case of the world studies extended essay, the issue addressed and the two disciplinary perspectives applied, and additionally the way in which this knowledge and understanding is demonstrated through the use of appropriate terminology and concepts.

Level	Descriptor
0	<i>The work does not reach a standard outlined by the descriptors below.</i>
1-2	<ul style="list-style-type: none">• Knowledge and understanding is limited.• The selection of source material has limited relevance and is only partially appropriate to the research question.• Knowledge of the topic/discipline(s)/issue is anecdotal, unstructured and mostly descriptive with sources not effectively being used. Use of terminology and concepts is unclear and limited.• Subject-specific terminology and/or concepts are either missing or inaccurate. Demonstrating limited knowledge and understanding.
3-4	<i>Knowledge and understanding is good.</i> <ul style="list-style-type: none">• The selection of source material is mostly relevant and appropriate to the research question.• Knowledge of the topic/discipline(s)/issue is clear; there is an understanding of the sources used but their application is only partially effective. Use of terminology and concepts is adequate.• The use of subject-specific terminology and concepts is mostly accurate, demonstrating an appropriate level of knowledge and understanding. If the topic or research question is deemed inappropriate for the subject in which the essay is registered no more than four marks can be awarded for this criterion.
5-6	<i>Knowledge and understanding is excellent.</i> <ul style="list-style-type: none">• The selection of source materials is clearly relevant and appropriate to the research question.• Knowledge of the topic/discipline(s)/issue is clear and coherent and sources are used effectively and with understanding. Use of terminology and concepts is good.• The use of subject-specific terminology and concepts is accurate and consistent, demonstrating effective knowledge and understanding.

C: Critical Thinking:

This criterion assesses the extent to which critical-thinking skills have been used to analyse and evaluate the research undertaken.

Level	Descriptor
0	<i>The work does not reach a standard outlined by the descriptors below.</i>
1-3	<p><i>The research is limited.</i></p> <ul style="list-style-type: none"> • The research presented is limited and its application is not clearly relevant to the RQ. Analysis is limited. • There is limited analysis. • Where there are conclusions to individual points of analysis these are limited and not consistent with the evidence. Discussion/evaluation is limited. • An argument is outlined but this is limited, incomplete, descriptive or narrative in nature. • The construction of an argument is unclear and/or incoherent in structure hindering understanding. • Where there is a final conclusion, it is limited and not consistent with the arguments/evidence presented. • There is an attempt to evaluate the research, but this is superficial. <p>If the topic or research question is deemed inappropriate for the subject in which the essay is registered no more than three marks can be awarded for this criterion.</p>
4-6	<p><i>The research is adequate.</i></p> <ul style="list-style-type: none"> • Some research presented is appropriate and its application is partially relevant to the Research question. Analysis is adequate. • There is analysis but this is only partially relevant to the research question; the inclusion of irrelevant research detracts from the quality of the argument. • Any conclusions to individual points of analysis are only partially supported by the evidence. Discussion/evaluation is adequate. • An argument explains the research but the reasoning contains inconsistencies. • The argument may lack clarity and coherence but this does not significantly hinder understanding. • Where there is a final or summative conclusion, this is only partially consistent with the arguments/evidence presented. • The research has been evaluated but not critically.
7-9	<p><i>The research is good.</i></p> <ul style="list-style-type: none"> • The majority of the research is appropriate and its application is clearly relevant to the research question. Analysis is good. • The research is analysed in a way that is clearly relevant to the research question; the inclusion of less relevant research rarely detracts from the quality of the overall analysis . • Conclusions to individual points of analysis are supported by the evidence but there are some minor inconsistencies. Discussion/evaluation is good. • An effective reasoned argument is developed from the research, with a conclusion supported by the evidence presented. • 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. • The research has been evaluated, and this is partially critical.

10-12	<p><i>The research is excellent.</i></p> <ul style="list-style-type: none"> • The research is appropriate to the research question and its application is consistently relevant. Analysis is excellent. • The research is analysed effectively and clearly focused on the research question; the inclusion of less relevant research does not significantly detract from the quality of the overall analysis. • Conclusions to individual points of analysis are effectively supported by the evidence. Discussion/evaluation is excellent. • An effective and focused reasoned argument is developed from the research with a conclusion reflective of the evidence presented. • This reasoned argument is well structured and coherent; any minor inconsistencies do not hinder the strength of the overall argument or the final or summative conclusion. • The research has been critically evaluated.
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D: Presentation:

This criterion assesses the extent to which the presentation follows the standard format expected for academic writing and the extent to which this aids effective communication.

Level	Descriptor
0	<i>The work does not reach a standard outlined by the descriptors below.</i>
1-2	<p><i>Presentation is acceptable.</i></p> <ul style="list-style-type: none"> • The structure of the essay is generally appropriate in terms of the expected conventions for the topic, argument and subject in which the essay is registered. • Some layout considerations may be missing or applied incorrectly. • Weaknesses in the structure and/or layout do not significantly impact the reading, understanding or evaluation of the extended essay.
3-4	<p><i>Presentation is good.</i></p> <ul style="list-style-type: none"> • The structure of the essay clearly is appropriate in terms of the expected conventions for the topic, the argument and subject in which the essay is registered. • Layout considerations are present and applied correctly. • The structure and layout support the reading, understanding and evaluation of the extended essay.

E: Engagement:

This criterion assesses the student's engagement with their research focus and the research process. It will be applied by the examiner at the end of the assessment of the essay, after considering the student's

Level	Descriptor
0	<i>The work does not reach a standard outlined by the descriptors below.</i>
1-2	<i>Engagement is limited.</i> <ul style="list-style-type: none">• Reflections on decision-making and planning are mostly descriptive.• These reflections communicate a limited degree of personal engagement with the research focus and/or research process.
3-4	<i>Engagement is good.</i> <ul style="list-style-type: none">• Reflections on decision-making and planning are analytical and include reference to conceptual understanding and skill development.• These reflections communicate a moderate degree of personal engagement with the research focus and process of research, demonstrating some intellectual initiative.
5-6	<i>Engagement is excellent.</i> <ul style="list-style-type: none">• Reflections on decision-making and planning are evaluative and include reference to the student's capacity to consider actions and ideas in response to setbacks experienced in the research process.• These reflections 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.

The Diploma Points Matrix

The Diploma Points Matrix demonstrates the role and impact of the extended essay in the awarding of an IB Diploma. Using the points scale listed above, the student will receive a letter grade for the extended essay ranging from A – E. If the student earns an E for the extended essay (or does not submit, thus earning an N), the student is disqualified from earning an IB Diploma. If the student scores a grade of D or above, the student is eligible for the IB Diploma, assuming other requirements are met. The most basic requirement for earning the IB Diploma is earning 24 total points on IB course assessments. If a student is shy of 24 total points, she can earn “bonus” points by combining extended essay and TOK results. The matrix below demonstrates the possible combination of points students can earn from these two tasks.

		Theory of Knowledge					
		Grade A	Grade B	Grade C	Grade D	Grade E	No grade N
Extended Essay	Grade A	3	3	2	2	Failing condition	Failing condition
	Grade B	3	2	2	1	Failing condition	Failing condition
	Grade C	2	2	1	0	Failing condition	Failing condition
	Grade D	2	1	0	0	Failing condition	Failing condition
	Grade E	Failing condition	Failing condition	Failing condition	Failing condition	Failing condition	Failing condition
	No grade N	Failing condition	Failing condition	Failing condition	Failing condition	Failing condition	Failing condition

Student/Advisor Meeting Process

It is the responsibility of the school to provide an extended essay supervisor, a Millbrook faculty member, for each student writing an extended essay. It is the responsibility of the student to take advantage of the supervisor as a critical resource for success on this project.

The Millbrook extended essay process mandates that each student will meet with their EE supervisor during specific times during EE writing process. Each meeting is structured to scaffold the EE development and writing process, reflecting the EE assessment criteria. The topics addressed at each of the EE meetings are as follows:

- EE topic and formulating a research question
- Research question and methodology
- Researched sources and content knowledge
- Content knowledge and analysis
- Discussion of EE draft
- Content analysis and evaluation/discussion
- Viva Voce

All dates are on the MHS DP website. These meetings are critical opportunities for guidance and support and will contribute to the student's grade in TOK. Following each meeting, the supervisor will submit a feedback form that reflects student conduct pertaining to each meeting. The criteria addressed in the feedback form include:

- Did the student set up an appointment in advance of the meeting?
- Did the student attend the scheduled meeting?
- Did the student meet with the supervisor by the initial deadline?
- Did the student prepare for the meeting in an appropriate fashion?
- Did the student engage appropriately during the meeting?
- Did the student demonstrate progress based on advice from the previous meeting?

The EE supervisor meetings are not used to evaluate the academic quality of the student's extended essay. The assessment of the meeting evaluates the extent to which the student engages during these meetings and learns how to plan and conduct such meetings as a part of the student's development as an investigator, collaborator and manager of their time. This is a critical part of the IB's self-management aspect of their Approaches to Learning framework. All students and their parents are required to submit an EE supervisor contract that indicates the expectations of student conduct regarding their relationship with their supervisor. The contract also specifies consequences of not meeting those expectations.

Reflection...

Following the meeting with your advisor, the student is responsible for filling out an online report that includes a brief summary of the meeting and the advice offered by the advisor. The advisor has NO responsibilities regarding paperwork following the individual meetings. The form will require students to identify 2-3 pieces of advice offered by their advisors in order to move forward on their papers.

The Research Question

The research question is the cornerstone to an effective research paper. The research question gives the paper a purpose, serving as a compass for the direction the writer will take throughout the process of research, analysis and evaluation. It also serves as a final determinant of the writer's success, asking finally, "Did you address and answer the question?" While the research question is only one component of a successful research paper, without a strong question, the research paper will be able to reach its full potential.

Tips for writing a strong research question

- Choose a topic that is of interest to the researcher. Any research will get old fast if the researcher is simply not interested.
- Choose a topic that is relevant. Investigating the cultural history of burping will likely not result in quality and respected research.
- Choose a topic that is researchable. The topic must be addressed within the timeframe available and with the resources at the researcher's disposal. If access to NASA laboratory equipment or graduate level background knowledge is required, the question is likely going to be out of reach.
- Focus the research question. A question that is too broad will not allow for focused and systematic research, nor will it allow an opportunity for in depth analysis or evaluation.

Qualities of a strong research question

- Clear – the reader knows from the question the intent of the paper being read
- Focused – there is only one question to be answered and it is clearly tied to the discipline in which it is being written
- Researchable – There is information available for the student to do appropriate research on the topic to adequately address the research question
- Arguable – the question allows for possible dissent and multiple perspectives, thus allowing for analysis and evaluation

Examples of strong research questions

- What role did economics play in the unification of Germany from 1834-1871? (History)
- Can One-hour-long light pulses applied during the night shift the phase of Circadian Rhythms in the Activity of Siberian Hamsters? (Biology)
- Can graphic novels be considered literature? (Language and Literature)
- How can mathematics be used to work out the optimal distance from the try line for a conversion kick in rugby union? (Mathematics)

Resources for helping write a strong research questions

- Writing Studio (Duke University) – <http://twp.duke.edu/writing-studio>
- Writing Center (George Mason University) – writingcenter.gmu.edu

Reflection in the Extended Essay

Reflecting Through the Research Process

From the IBO EE Guide:

Reflection is a continual process. If you are constantly considering the decisions you are making in the extended essay (EE) process, you are better able to avoid the common pitfalls of independent research. Reflection also helps you plan, allowing you to monitor your progress.

The following table identifies three stages in the review process and the kinds of questions you can usefully consider at each. It also suggests what evidence you might use in your reflection sessions to demonstrate your progress and learning.

Stage	Types of questions you may ask yourself	Evidence from my researcher's reflection space
Initial: Planning stages	<ul style="list-style-type: none"> • What am I interested in researching and why? • What are my motivations for undertaking research in this area? • How will I begin the research process? • Is my chosen topic appropriate for the subject I have chosen to complete it in? • Do I have sufficient knowledge of the subject area to fulfill the criteria of an EE? • What possible question(s) might I research? • How might I go about undertaking this research? • Do I have access to appropriate sources? • Are my chosen research methods appropriate for the subject I have chosen to complete it in? • Are there any ethical issues I need to consider before pursuing this area of research? • Is there sufficient focus to my research area? 	<ul style="list-style-type: none"> • Mind map® • Annotated section of the <i>Extended essay guide</i> • Annotated bibliography • Annotated photograph, newspaper article, and so on
Background reading stage	<ul style="list-style-type: none"> • What have I learned about my subject area so far? • What questions are emerging? Are these similar or different to my initial questions? • Given the initial reading I have undertaken on the subject, is my research question appropriate for the subject I am submitting my EE in? • Is my research question manageable within the word limit of the EE? • Will my research question allow me to think critically about the topic I am researching? If it suggests a descriptive response, how might I need to change it to allow for more critical thinking? 	<ul style="list-style-type: none"> • Notes • Annotated article • Brainstorm of questions • Mind map® of potential challenges and possible strategies

	<ul style="list-style-type: none"> • Are there any challenges that I need to overcome in order to achieve my desired outcomes 	
Interim: Writing stage	<ul style="list-style-type: none"> • Do I have sufficient data/information to begin formulating an argument? • If I do not have sufficient data/information, how will I go about resolving this? Can it be resolved? • To what extent does the data/information I have relate to my proposed research question? • Given the data/information I have collected, do I need to reformulate my research question? • Has the data/information collected taken me in an unexpected direction? • Do I want to change course now? Is it too late? • Are there still questions/issues that I am unclear how to resolve? • Am I keeping to a schedule with the writing process? 	<ul style="list-style-type: none"> • Introduction of the essay • Annotated sections from books, journals, articles, and so on • Reworked research question • Examples of data/information collected from research
Final: Writing stage	<ul style="list-style-type: none"> • Do I have a reasoned argument that can be sustained throughout the essay? • Am I able to make coherent links between different points made and the evidence presented? • To what extent have I answered my research question? • What reasons may have affected my ability to answer my research question? • If I have been selective in the evidence presented in my essay, can I justify my choices? • Is there a clear summative conclusion, and does this reflect the discussion that has taken place? • To what extent do I think I have fulfilled the expectations of the extended essay as a task? • Has my research resulted in me changing my perspective or views on the topic in question? • What strategies have I employed that have worked particularly well at this stage of the process? 	<ul style="list-style-type: none"> • An outline of the main argument • Timeline • Working bibliography
<i>Viva voce</i>	<ul style="list-style-type: none"> • To what extent has my thinking been confirmed or changed about my chosen topic as a result of my research? • What strategies did I employ that proved particularly effective in the research process? • What skills have I developed and how might these be useful in the future? • What improvements might I suggest to my own working practices? • How might different research strategies have impacted my outcomes? • What did I learn about myself as a learner in this process? 	

Guiding Student Reflection

From the IBO EE Guide:

In critically reviewing your engagement in the research process, it might help to think in terms of three levels of reflection: descriptive, analytical and evaluative reflection. The table below gives examples of guiding questions to help with this. They are not exhaustive.

Level of reflection	Example of the kinds of questions students may have asked and answered of themselves
Descriptive	<ul style="list-style-type: none">• What did I do?• How did I undertake my research?• What were the problems I faced?• Did my approach or strategies change throughout the process?• What have been the high and the low points of the research and writing process?
Analytical	<ul style="list-style-type: none">• Was my research successful?• If I changed my approach or strategies during the process, why did I do this?• What did I learn from the experience in terms of my understanding of the subject area and/or the skills needed to undertake research?• How has my understanding of the topic and research process developed throughout the task?
Evaluative	<ul style="list-style-type: none">• If I were to undertake this research again, would I do it differently—if so, why or why not?• What has affected this?• If I did do the research again, would I change the theories applied or the methodological approach? Would this have led to a different outcome?• What can I conclude from this?• Were the strategies I used for undertaking my research the most appropriate for achieving my outcomes?• What, if any, questions emerged as a result of my research that I was not expecting? Would these questions influence my approach if I were to undertake the research again?

These levels correspond to the attainment levels of the rubric for [criterion E \(engagement\)](#).

Researcher's Reflection Space (RRS)

From the IBO EE Guide:

The RRS is a personal learning environment that can be either a physical or virtual support tool. It is a space in which students are able to record reflections on what they are reading, writing and thinking. The use of the RRS will help students to prepare for their reflection sessions with their supervisors and inform the discussions that take place. In preparing for their reflection sessions students could use their RRS to:

- record their reflections
- respond to artefacts, such as photos, newspaper clippings, twitter feeds, blogs, and so on
- respond to prompts and questions that may arise in the students' subject areas and other classes
- create MindMaps[®];
- record emerging questions.

Use of the RRS is strongly recommended as it will allow the student to more clearly articulate and understand their decision-making process. It supports learning, thinking, critical analysis and evaluation.

Reflections on Progress and Planning Form (RPPF)

The student is required to formally reflect on the Extended Essay writing and research process three times during the span of the EE process. Each formal reflection will be captured in the *Reflections on Progress and Planning Form* (RPPF) following specific supervisor meetings. The three reflections constructing the RPPF will be the basis for assessment in Criteria E. The maximum word count for the RPPF is 500 words and is NOT included in the main EE word count.

The following information from the IBO Guide will help the student plan for reflection on the RPPF. The student can use the Researcher's Reflection Space as a place to consider the content of these reflections.

The First Reflection Session

Students are encouraged to include in their RRS examples of initial topic exploration, possible sources and methods, preliminary research questions and their personal reactions to the issues.

In attending their first reflection session with their supervisor, students can use notes made in the RRS as the basis for discussion as well as to demonstrate the progress students have made in the research process.

The Interim Reflection Session

As their RRS develops, students can demonstrate the progress of their thinking, the development of their argument and raise any questions they may have with their supervisor.

At this stage the RRS may include reactions to readings, progress in the timeline for completion of the extended essay, a possible outline of arguments, challenges encountered and the strategies used to overcome them.

The Final Reflection Session – The Viva Voce

During the *viva voce*, which takes place at the completion of the extended essay process, the RRS can form the basis for discussion about the process of completing the essay. Students can show what they have learned about the topic, the research process followed, their own learning, as well as outlining new questions they have uncovered. Most importantly, during the *viva voce* the RRS may help to highlight the personal significance of the work to the student and ultimately contribute to the supervisor's report.

Citations

Purpose of Citations

It is critically important to pay close attention to how and when you cite sources during the research process that ultimately reflect in your final work. Citing sources has a few critical functions:

- Demonstrates that the researcher has utilized appropriate sources in the process of the research
- Gives credit to the appropriate scholars for their initial research, analysis and ideas
- Allows readers to follow up on the research done by the author via the citations offered in the bibliography and citations list
- Avoids plagiarism by identifying direct quotes, ideas and specific information taken from other sources

Citation Contents

Citations will vary depending on the style the researcher chooses to use. All citations, however, are used for the primary purpose of identifying the source used in such a manner that the source can be tracked down by the reader (either for verification or for follow-up research). Thus all citations are going to have certain critical information, including

- The author's name
- The title of the source and, if different, the title of the publication in which it is presented
- The date of publication
- Other identifying information, such as page number(s), volume and issue number, url, etc

Citation Styles

There are a number of styles a student can utilize in the process of citing sources used during the research. Ultimately it is up to the researcher, with the guidance of the advisor, to determine the style he or she will employ. That said, there are certain conventions utilized for different disciplines that allow the researcher to effectively highlight the research. The following is a brief list of styles commonly used for different disciplines:

- Art History – Chicago or Turabian
- Biology – CSE (Council of Science Editors)
- Chemistry – ACS (American Chemical Society)
- Film – APA or Chicago
- History – Chicago
- Literature – MLA (Modern Language Association)
- Mathematics – AMS (American Mathematical Society)
- Music – Chicago
- Physics – AIP (American Institute of Physics)
- Political Science – APSA (American Political Science Association)
- Psychology – APA (American Psychological Association)
- Religion – Chicago or MLA
- Theatre – Chicago or MLA

Information taken from *American University Citation Style Guide*

Formal Structure of the Extended Essay

The formal structure of the extended essay is assessed in D: Presentation. The criteria specifically addresses the various elements of the paper, required and optional.

Required

- **12 pt. readable font**
- **Double spaced**
- **Page-numbered**

Title Page

- *Title:* Be sure the title is clear. The title cannot be the research question.
- *No identifying information (student's name and candidate number)*
- *Word Count:* The word count cannot exceed 4,000 words. The word count includes the Introduction, Main Body and Conclusion. Direct quotes are included in the word count, but charts, diagrams, formulas and annotated illustrations are not included.

Table of Contents

The body of the paper can be, but is not required to be, divided into multiple sections. It must, however, include a table of contents.

Introduction

Main Body

The main body of the paper can be divided into multiple sections, such as “Introduction, Research and Analysis, Conclusion,” but this is not required. See multiple EE exemplars for suggested formatting.

Conclusion

Citations

Citations can take any format, but must be consistent throughout the paper. They can be footnotes, endnotes or parenthetical. A section explaining referencing is included near the end of the manual. The student is advised to consult with the supervisor to determine the appropriate style based on the convention of the discipline being researched.

Bibliography

The bibliography is an alphabetical listing of all works specifically utilized in the construction of the extended essay. If a source is not cited within the body of the work, it is not included in the bibliography. If a source was important to the student in the shaping and development of the paper, but was not specifically cited, it can be recognized in the introduction or in an “Acknowledgements” section.

Optional

Acknowledgements page

Appendix – Assessors are not required to read material in the appendix, so information critical to the argument must be included in the body of the paper.

Viva Voce

The *viva voce* is a short interview between the student and the supervisor, and is a recommended conclusion to the extended essay process. The *viva voce* should last 20–30 minutes. The *viva voce* is:

- an opportunity to ask the student a variety of open-ended questions to elicit holistic evidence of the student’s learning experience.
- an opportunity for the supervisor to confirm the [authenticity](#) of the student’s ideas and sources
- an opportunity to reflect on successes and difficulties encountered in the research process
- an aid to the supervisor’s comments on the *Reflections on planning and progress form*.

The following are examples of questions that can be asked, which should be adapted to the particular essay and student.

- “I am not clear what you mean on page XXX. You quote Y: could you explain a little more about what this tells us?”
- “On page *** you cite Z. I couldn’t find this reference (for example, website). Could you tell me more about it?”
- “What have been the high and low points of the research and writing processes?”
- “What were the most interesting aspects of the process? Did you discover anything that surprised you?”
- “What have you learned through writing this essay? Is there any advice you would want to pass on to someone just starting out on an extended essay?”
- “Is there anything else that you would particularly like me to mention in my report?”

In conducting the *viva voce* and writing their comments on the *Reflections on planning and progress form*, supervisors will keep in mind the following:

- The form is an assessed part of the extended essay. An incomplete form resulting from supervisors not holding reflection sessions, or students not attending them, could lead to criterion E (engagement) being compromised.
- In assessing criterion E (engagement), examiners will take into account any information given on the form about unusual intellectual inventiveness. This is especially the case if the student is able to demonstrate what has been learned as a result of this process or the skills developed.
- Examiners want to know that students understand any material (which must be properly referenced) that they have included in their essays. If the way the material is used in context in the essay does not clearly establish this, the supervisor can check the student’s understanding in the *viva voce* and comment on this on the *Reflections on planning and progress form*.
- If there appear to be major shortcomings in citations or referencing, the supervisor will investigate thoroughly. No essay will be authenticated if the supervisor believes the student may be guilty of plagiarism or some other form of academic misconduct.
- Unless there are particular problems, the *viva voce* will be a positive experience. Completion of a major piece of work such as the extended essay is a great achievement for students.

Extended Essay Subject Availability

The following list indicates, by group, all of the disciplines in which an Extended Essay can be written at Millbrook High School. While the IBO requires no prior knowledge in order to write an Extended Essay, it is expected that the student is studying the subject of choice so that the topic chosen can be investigated at a reasonable academic level.

Biology
Chemistry
Computer science
Dance
Environmental systems and societies
Film
Geography
History
Human rights
Information technology in a global society
Language A (English)
Literature and performance
Mathematics
Music
Peace and conflict studies
Physics
Politics
Psychology
Social and cultural anthropology
Theatre
Visual arts
World religions
World studies

Resources/Links/Sample Essays

Exemplar Extended Essays and EE Subject Reports – shared with EE advisors

Purdue Online Writing Lab – owl.english.purdue.edu

George Mason University Writing Center – writingcenter.gmu.edu

American University Citation Style Guide – <http://subjectguides.library.american.edu/citation>

MIT Libraries – Citing Sources – <http://libguides.mit.edu/citing>

Bibme Citation Guide – <http://www.bibme.org/citation-guide>