



Prva gimnazija Varaždin

INTERNATIONAL BACCALAUREATE DIPLOMA  
EXTENDED ESSAY HANDBOOK

ACADEMIC YEAR 2024-2025



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## Extended Essay Overview

### Key features of the EE

- It is a piece of independent research and in-depth study of a focused topic from one of the student's six chosen subjects, or a subject that a course student has a background in.
- It is presented as a formal piece of academic writing containing no more than 4,000 words accompanied by a reflection form of no more than 500 words
- The result of approximately 40 hours of work by the student.
- It is intended to promote academic research and writing skills, which helps prepare students for success at university
- A process supported by a supervisor for a recommended 3-5 hours, which includes 3 mandatory reflection sessions, which the student comments in the relevant comment section on the reflection form
- The final reflection session includes the Viva Voce, a mandatory short interview with the supervising teacher.
- The purpose of Viva Voce is to reflect on the process of writing the EE, clarify elements of the EE, confirm the authenticity of the EE and to aid in the supervisor's report.
- An assessment of this reflection process is made under [criterion E \(Engagement\)](#) using the *Reflections on planning and progress form*.
- The extended essay is externally assessed against common criteria, interpreted in ways appropriate to each subject
- It must achieve a minimum D grade or higher to be awarded the Diploma.
- The grades for the EE and TOK combine for a maximum of 3 points of the total 45 IB Diploma points.

# Extended Essay Schedule

## Timeline

### YEAR 1 3IB

EVENT/ACTION/SUBMISSION	INTERNAL DEADLINE	WHO/RESPONSIBILITY
<b>EE Session 1</b> Introductory session – ATLs and LP in the EE Subject-specific guidelines	September/October 2024	EE coordinator
<b>EE Session 2</b> Research fundamentals	November 2024	EE coordinator
<b>EE sessions 3</b> Writing skills: formal register	December 2024	EE coordinator
<b>EE Session 4</b> Research skills-referencing	January 2025	EE coordinator
<b>EE Session 5</b> Writing skills-academic writing (analysis and practice)	February 2025	EE coordinator
<b>EE SUBJECT DECISION</b>	<b>February 21, 2025</b>	Students/EE SUPERVISORS
<b>EE Session 5</b> Writing skills-academic writing (practice) Research skills – subject- specific areas and topics	March, 2025	EE coordinatory Students
<b>EE Fair – Y2 to Y1 passing experience</b>	March, 2025	EE coordinator, DP coordinator/students
<b>EE Topic decision</b>	<b>March 31, 2025</b>	Students/EE supervisor
<b>EE Session 7</b> Writing skills- EE outline	April, 2025	EE coordinator
<b>EE Session 8</b> Communication skills - formal presentation	Early May 2025	EE coordinator
<b>EE Session 9</b> <b>PRESENTATIONS of EE OUTLINES</b>	<b>May 12-16, 2025</b>	Students/EE supervisors/EE coordinator
<b>EE Session 10</b> Reflection session 1, RPPF	June, 2025	Students/EE supervisors/ EE coordinator

### YEAR 2 4IB

EVENT/ACTION/SUBMISSION	INTERNAL DEADLINE	WHO/RESPONSIBILITY
<b>EE 1<sup>ST</sup> DRAFT - submission</b>	<b>October 4, 2024</b>	Students/ EE coordinator
<b>EE 1<sup>st</sup> draft – feedback</b>	<b>October 14, 2024</b>	EE supervisors

<b>INTERIM REFLECTION SESSION</b>	October 14-18, 2024	EE supervisors/students
<b>EE final draft – submission to EE supervisors</b>	November 29, 2024	Students/EE coordinator
Informal check-in reflection session	End of December, 2024	Students/EE supervisors
<b>Viva Voce – final reflection session, RPPF (students)</b>	January 7-15, 2025	Students/EE supervisors
<b>EE Upload RPPF – completion</b>	From January 15, 2025	EE supervisors IBIS

## Responsibilities of students and supervisors

### STUDENT'S ROLE

It is required that students:

- Choose a topic that fits into one of the subjects on the approved extended essay list
- Observe the regulations relating to the EE
- Meet deadlines
- Acknowledge all sources of information and ideas in an approved academic manner.

It is strongly recommended that students:

- Start work early
- Think very carefully about the research question for their essay
- Plan how, when, and where they will find material for their essay
- Plan a schedule for both researching and writing the essay, including extra time for delays and unforeseen problems
- Record sources as their research progresses (rather than trying to reconstruct a list at the end)
- Have a clear structure for the essay itself before beginning to write
- Make sure that all basic requirements are met (format, referencing, RPPF)

### SUPERVISOR'S ROLE

- Undertake 3 mandatory reflection sessions with each student they are supervising
- Provide students with advice and guidance in the skills of undertaking research
- Encourage and support students throughout the research and writing of the EE
- Discuss the choice of topic with each student and help to formulate a well-focused research question which is suitable to the subject of registration
- Monitor the progress of the extended essay to offer guidance and to ensure the EE is the student's own work

- Read and comment on one draft only of the EE (but not edit the draft); this should take place after the interim reflection session, but before the final reflection session
- Read the final version and, in conjunction with the viva voce, confirm its authenticity.
- Sign and date each reflection summarized on the RPPF and provide comments

(The IB Extended Essay Guide, 2018)

## Research and Writing Process

### Pre-writing: research process

#### Choice of subject -

Tips on choosing a subject:

- Think about a subject that could be relevant for your further studies
- Read through your textbooks and syllabi for each of your subject to find topic areas you are interested in
- It is recommended to choose a HL subject
- Conduct some research about various areas in the subject and get informed about subject-specific methodology

#### Choice of topic

Tips on choice of topic:

- Think about a topic that you are passionate about and that will keep your motivation throughout the process of writing your EE
- Carry out preliminary reading and consider the following questions:
  - What has already been written about this topic?
  - Was it easy to find sources of information?
  - Is there a range of different sources available?
  - Is there a range of views or perspectives on the topic?
  - What interesting questions have started to emerge from this reading?
- Consider the emerging questions - begin posing open-ended questions about your general topic. These questions will usually be formulated using the terms “how”, “why” or “to what extent”.

### Research question

A research question is the crucial element of the EE. All students, regardless of the subject chosen, must frame their research question as a question.

A clear and well-focused research question, which has a specific aim, will allow you to develop a reasoned argument within the scope of the task, rather than the kind of “all about” essay that an unfocused research question can lead to.

Sometimes research question needs to be revised during the process of writing; therefore, a research question should always be considered provisional until you have enough research data to make a reasoned argument.

### ***Criteria for Developing an Effective Research Question***

- Make sure questions are feasible:
  - Avoid questions that are too broad in scope and cannot be answered in 4000 words
  - Avoid questions that are too narrow or trivial
  - Avoid questions that are unanswerable based on evidence (ie “what if” questions)
- Make sure questions are sharply focused:
  - Limit your investigation to a specific area (instead of researching all Totalitarian governments, investigate a specific one, such as Hitler’s Nazi government)
- Make sure it is a critical thinking question
  - The question must allow you to respond by making a judgment based on the evidence you have gathered
  - “What causes cancer?” Not only is it too broad for a 4000-word research essay, but it also prompts only a regurgitation of information on all potential causes of cancer, rather than requiring you to evaluate evidence and make a judgment.

(The IB Extended Essay Teacher Manual, Canadian International School, 2015)

- Evaluate the question taking into consideration its clarity, focus and argument:
  - **Clear:** Will the reader understand the nature of my research? Will it direct the research being undertaken?
  - **Focused:** Will the research question be specific enough to allow for exploration within the scope of the task (that is, the number of words and time available)?
  - **Arguable:** Does the research question allow for analysis, evaluation and the development of a reasoned argument?
- Consider research outcomes –
  - try to predict possible outcomes of the research
  - outline the kind of argument you might make and how the research might support this
  - consider options if the research available is not sufficient to support a sustained argument



### **Sample research questions**

The following table gives guidance on the difference between unclear and unfocused research questions and those that are appropriately clear and focused, lending themselves to in-depth research.

<b>Unclear, unfocused and unarguable research questions</b>	<b>Clear, focused, narrow research questions lending themselves to in-depth research</b>
What was the impact of Ho Chi Minh's allegiance to Lenin?	To what extent was nationalism the guiding factor in Ho Chi Minh's adoption of Leninism in 1920?
What is the history of Chinese theatre?	How does the legacy of Mei Lan Fang contribute to modern Jingju?
How important is chlorophyll to plant life?	What is the effect of different concentrations of kinetin on leaves aging and the biosynthesis of chlorophyll?
How can the US government's spending policy be reformed?	To what extent did the rising COE prices affect the demand for new and used cars by the consumer population and hence affect the revenue generated by the Singaporean economy for the period 2012–16?

(The IB Extended Essay Guide, 2018)

### **An important note:**

A question that is unclear or too broad will result in a narrative overview of the issue or event being discussed and provide little scope for analysis and reasoned argument. The result of this is that examiners will not be able to apply the range of marks available in the assessment criteria, particularly in relation to Criterion C (Critical thinking)

### Academic context

Academic context refers to the academic research and knowledge about a given topic which has been acquired so far. It is vitally important to provide a short summary of the academic context of the research question in the introduction. This is the starting point of the extended essay, and it shows that the student has conducted adequate preliminary research and has a sound basis for their analysis and argumentation.

### Methodology

Methodology is the term used to describe a specific approach to gather data and acquire knowledge required to address the research question. Research methodology includes methods of gathering and analysing data. It is subject-specific which means that research methods can be different for various subjects. For example, in language and literature as well as in language acquisition, research methodology usually means identifying and choosing primary and secondary sources, reading, analysing and comparing data. In sciences, the most common methods are experiments, lab work, observation, comparison, and analysis while in mathematics, in addition to primary and secondary sources, data from other disciplines can be gathered and used.

## Writing the Extended Essay

### Format, Structure and Presentation

The format and the structure of the essay are of vital importance. They help students to organize the argument, making the best use of the evidence collected.

#### Format

There are six required elements of the final work to be submitted. Please note that the order in which these elements are presented here is not necessarily the order in which they should be written.

Six required elements of the extended essay:

1. Title page
2. Contents page
3. Introduction
4. Body of the essay
5. Conclusion
6. References and bibliography

#### Title page

The title page should include **only** the following information:

- the title of the essay
- the research question
- the subject for which the essay is registered (if it is a language essay also state which category it falls into; in case of a world studies essay also state the theme and the two subjects utilized)
- word count.

#### ***An important note:***

Please note that name of the student or the school should not appear on the title page or on any page headers. This is because the work is assessed anonymously.

#### The title

The title of your essay should be a clear, focused summative statement of your research, which gives the reader an indication of your research topic. It should **not** be phrased as a research question.

Examples:

Title	Research question
Negative externalities of consumption: Australian policy on cigarette packaging	How effective has the Australian policy of plain cigarette packaging been in reducing the negative externalities associated with the consumption of cigarettes in X?
Commodification and the body—an ethnographic study of social representations	To what extent can we interpret the negative attitude from laymen towards organ donation as an act of resistance towards the demands

about the human body with relation to organ donation	of the hegemonic medical model? The case of organ donation in Argentina
An exploration of evil as a motivating force in drama	How effectively does Christopher Marlowe present his view of evil in <i>Dr Faustus</i> ?
The feasibility of wireless networking in a city-wide context	To what extent is wireless networking a feasible alternative to cabled networking within a whole-city context?

## Contents page

A contents page must be provided at the beginning of the extended essay and all pages should be numbered. Please note that an index page is not required and if included will be treated as if it is not present.

(The IB Extended Essay Guide, 2018)

## Structure

### Introduction

The introduction should tell the reader what to expect in the essay. The introduction should include:

- clearly and explicitly stated research question
- a thesis or answer to the research question
- reasons why it is a topic worthy of research and investigation
- academic context – how the research question fits within existing knowledge and understanding of the topic

### Body of the essay (research, analysis, discussion and evaluation)

The main task is writing the body of the essay, which should be presented in the form of a reasoned argument. It should be divided into paragraphs and for some topics, it is advisable to use sub-headings to help the reader understand the argument. Students should take into consideration the subject-specific convention when structuring their essay.

The body of the essay should:

- present the findings of the research
- analyse those findings using a discipline-specific terminology
- present the analysis and the results by supporting the conclusions with evidence
- evaluate the methodology used in order to answer the research question

The evaluation of methodology may include:

- how data was collected/generated
- any methodological problems and their solutions and effects

### Critical discussion and drawing conclusions – tips:

- Use tools/signposts of critical discussion: logical paragraph structure, linking words and phrases, as well as reporting verbs (e.g. states, argues, evaluated, demonstrates, suggests, highlights, emphasizes, etc.)

- Structure critical discussion in writing: clearly state and introduce the main issue to be debated (topic sentences)
- Use sources effectively: after explaining information from a particular source, provide further explanation of the issue, show consensus in point of view/findings on the issue, show alternative, varied, or opposing points of view on the issue
- Lend your own voice to the debate/discussion by commenting on the findings (Lekanides 62).

## Paragraphs

Each paragraph should develop one controlling idea, and all paragraphs should build up and contribute to the overall argument or thesis of the essay

- Main idea/point of the paragraph should be clearly stated (topic sentence)
- Develop main ideas thoroughly in your own words (explanation, supporting sentences)
- Provide evidence/examples to support your development (use quotations and paraphrases; remember to cite!)

## Conclusion

The conclusion says what has been achieved, including notes of any limitations and any questions that have not been resolved. It synthesizes what has been presented in the body, combining the findings, analysis and evaluation to provide an answer to the research question

- Has the research problem been “solved”?
- To what extent have the objectives been achieved?
- What has been learnt from the results?
- How can this knowledge be used?
- What are the shortcomings of the research, or research methodology?

(The IB Extended Essay Student Handbook International School Ho Chi Minh City, 2018)

## References and bibliography

Students should use their chosen style of academic referencing as soon as they start writing. That way they are less likely to forget to include a citation. It is also easier than trying to add references at a later stage. For more information on this, refer to the guidelines in the IB document ***Effective citing and referencing***.

## Presentation

The extended essay should be written in a clear, correct and formal academic style, appropriate to the subject from which the topic is drawn. It should strive to maintain a professional, academic look. To help achieve this, the following formatting is **required**:

- the use of 12-point, readable font
- double spacing
- page numbering
- no candidate or school name on the title page or page headers.

Submitting the extended essay in the required format will help set the tone of the essay and will aid readability for on-screen assessment by examiners.

## Word counts

The upper limit is 4,000 words for all extended essays.

### ***Please note:***

Examiners are instructed not to read or assess any material in excess of the word limit. This means that essays containing more than 4,000 words will be compromised across all assessment criteria.

*Please refer to the following guidance on what content should be included in the word count:*



### **Included in the word count**

The introduction

The main body

The conclusion

Quotations

Footnotes and/or endnotes that are not references



### **Not included in the word count**

The contents page

Maps, charts, diagrams, annotated illustrations

Tables

Equations, formulas and calculations

Citations/references (whether parenthetical, numbered, footnotes or endnotes)

The bibliography

*The Reflections on planning and progress form*

Please refer to the document entitled *Diploma Programme assessment: Principles and practice* for further clarification of word count requirements.

## Illustrations

Illustrative material, such as graphs, diagrams, tables, and maps, should be used effectively, which means they should be clearly labelled and interpreted. Any labelling should contain the minimum information to ensure the examiner understands the significance of the map, chart, diagram or illustration.

### Tips:

- use illustrative materials to illustrate a specific point made in the essay
- relate illustrations directly to the text
- do not include commentary in the labelling as this will be considered as part of the essay discussion and thus included in the word count.
- acknowledge illustrations where appropriate
- annotate and/or caption appropriately photographs and other images

## Tables

The use of tables should be considered carefully as they are only appropriate in certain subjects. Tables must not be used as an attempt to circumvent the word limit.

## Footnotes and endnotes

Footnotes and endnotes may be used for referencing purposes. If information contained in a footnote or endnote and **is not a** reference, this **must** be included in the word count. However, all information that is directly relevant to the analysis, discussion and evaluation needs to be included in the main body of the essay not in a reference.

## Appendices

Appendices are not an essential part of the extended essay and examiners will not read them, or use any information contained within them, in the assessment of the essay. Appendices should therefore be avoided except in the following instances:

- an exemplar of a questionnaire or interview questions
- an exemplar of permission letters
- group 1, category 1 essays: copies of poems or short stories (of less than three pages)
- group 1, category 3 essays: excerpts from newspapers, advertisements and transcripts of speeches
- language acquisition, category 1 and 2: excerpts from newspapers, advertisements, transcripts of speeches, etc
- language acquisition, category 3: excerpts or copies of poems or short stories (less than 3 pages)
- an external mentor letter, where one has been used
- raw data or statistical tables for experimental sciences (this should not include any analysis or conclusions).

## Academic honesty

Research practices when working on an extended essay must reflect the principles of academic honesty. The essay must provide the reader with the **precise** sources of quotations, ideas and points of view through accurate citations, which may be in-text or footnotes, and full references listed in the bibliography,

**Failure to comply with this requirement will be viewed as academic misconduct and will, therefore, be treated as a potential breach of IB regulations.**

For further information, see *Academic honesty in the IB educational context* and *Effective citing and referencing*. Links:

[https://resources.ibo.org/data/g\\_0\\_malpr\\_sup\\_1408\\_2a\\_e.pdf](https://resources.ibo.org/data/g_0_malpr_sup_1408_2a_e.pdf)

[https://resources.ibo.org/data/g\\_0\\_malpr\\_sup\\_1408\\_2b\\_e.pdf](https://resources.ibo.org/data/g_0_malpr_sup_1408_2b_e.pdf)

## Bibliography

A bibliography is an alphabetical list of every source used to research and write the essay. Sources that are not cited in the body of the essay but were important in informing the approach taken should be cited in the introduction or in an acknowledgment. The bibliography **must** list only those sources cited

## Citations

A citation is a shorthand method of making a reference in the body of an essay, either as an in-text citation or footnote/endnote. This must then be linked to the full reference at the end of

the essay in the bibliography. A citation provides the reader with accurate references so that he or she can locate the source easily.

Here is an example of a piece of information cited using **APA style**:

According to Jones (1998), "students often had difficulty using APA style, especially when it was their first time" (p. 199)

In this example the information in the first parenthesis refers to the year when the Jones' work was published, and the second parenthesis contains the information about the page where that exact phrase can be found.

How sources are cited varies with the particular referencing style that has been chosen. Page numbers should normally be given when referencing printed material and this is especially so in the case of direct quotations.

**MLA style** offers the following layout:

Romantic poetry is characterized by the "spontaneous overflow of powerful feelings" (Wordsworth 263)

In this example the parenthesis contains the surname of the author cited and the page where the cited phrase can be found.

For some styles this will also be in the citation, in others in the full reference. Once again, it is important to emphasize that there must be consistency of method when citing sources.

## Referencing

A reference is a way of indicating to the reader, in an orderly form, where information has been obtained. A reference provides all the information needed to find the source material.

Here is an example of a source referenced using **the AMA style**:

O'Keefe M, Coat S. Consulting parents on childhood obesity and implications for medical student learning. *J Paediatr Child Health*. 2009 Sep 14; 45(10): 573-576

The order of the elements of the entry consists of the following:

Author: Last name First Initial Middle Initial. Author Last name First Initial Middle Initial Title in sentence case. *Abbreviated Journal Title in Title Case*. Year Month Day; volume (Issue#): PP-PP.

References must be cited because they acknowledge the sources used and enable the reader to consult the work and verify the data that has been presented.

References must be given whenever someone else's work is quoted or summarized. References can come from many different sources, including books, magazines, journals, newspapers, emails, internet sites and interviews.

There are a number of different styles available for use when writing research papers; most are appropriate in some academic disciplines but not others. The supervisor or school librarian should help the student decide on a style for a particular subject of the essay. It is important to remember that whatever style is chosen, it must be applied consistently and in

line with the IB's minimum requirements. When choosing the style, the student needs to have a clear understanding of how it is to be used before embarking on the research task.

The following website offers detailed information pertinent to most appropriate referencing styles:

[https://owl.purdue.edu/owl/research\\_and\\_citation/resources.html](https://owl.purdue.edu/owl/research_and_citation/resources.html)

The style should be applied in both the final draft of the essay and in the initial research stages of taking notes. This is good practice, not only for producing a high-quality final product, but also for reducing the opportunities and temptation to plagiarize.

The IB's minimum requirements include:

- name of author
- date of publication
- title of source
- page numbers (print sources only)
- date of access (electronic sources only).

Any references to interviews should state the name of the interviewer, the name of the interviewee, the date and the place of the interview.

For more detailed information on styles for citations and referencing please refer to the IB document *Effective citing and referencing*.

[https://resources.ibo.org/data/g\\_0\\_malpr\\_sup\\_1408\\_2b\\_e.pdf](https://resources.ibo.org/data/g_0_malpr_sup_1408_2b_e.pdf)

### Referencing online materials

References to online materials should include the title of the extract used as well as the website address, the date it was accessed and, if possible, the author. all electronic sources must be date stamped by including the date the student accessed the resource (for example, accessed 12 March 2016).

**Electronic sources** should be used critically and with care.

Tips:

- know appropriate search engines to use (e.g. Google Scholar, ResearchGate, etc.)
- not rely exclusively on sources found on the internet
- have a clear and focused research question to help search more directly on the internet (given the amount of information available it is easy to be overwhelmed)
- critically evaluate the reliability and validity of the information presented on the internet
- keep a detailed record of all references, in accordance with the IB's minimum requirements, ensuring that the URL of where the source was located is written down correctly. This includes recording the date that the site was accessed.
- there is a website (<https://www.bibme.org/>) that can aid you in formatting proper references and checking for unintentional plagiarism.
- The [Researcher's reflection space](#) (RRS) is a good tool for supporting this practice

### Online encyclopedias and other similar information websites

As a tool for research, free online encyclopedias (e.g. Wikipedia, Britannica, etc.) can be valuable resources. If used appropriately and critically they can offer a useful starting point for the research. Reasons why students should **be cautious** in using them:



- they tend to be general encyclopedias
- very often the author is unknown
- there is no guarantee that the content meets standards of academic rigour (lack of peer review)
- the content can be unstable, in that it can change at any time.
- They may not be relevant or appropriate for the research question being explored.

If using free online encyclopedias, students should do the following.

- Follow the references provided by the encyclopedia; this will help to verify the information given.
- Consider whether the article is part of a larger project, where a number of people are contributing to the discussion. If it is, then it implies that the writers have more than a casual interest in the topic being written about.
- Look to see if there is a rating for the information provided. If there is, then this means that the information has undergone some sort of peer review and been given a rating. While not the same as an academic peer review, it can aid the judgment of the “quality” of the information.

Hints how to determine the reliability and validity of information presented on the internet.

<b>Desirable source attribute</b>	<b>Questions to consider</b> in order to determine this
<b>Authority</b>	<ul style="list-style-type: none"> <li>• Is the author of the information identified?</li> <li>• If the author has chosen to remain anonymous, why might this be? Is this significant in terms of your evaluation of the information presented?</li> <li>• Is there enough information available to establish the author’s credibility?</li> <li>• Is the author affiliated to an academic institution or credible organization?</li> <li>• Is the author qualified to write about the subject?</li> </ul>
<b>Audience appropriate</b>	<ul style="list-style-type: none"> <li>• Who is the intended audience?</li> <li>• Does the information presented appropriately address the target audience?</li> <li>• Is the information relevant to your area of research?</li> </ul>
<b>Reliability and credibility</b>	<ul style="list-style-type: none"> <li>• Does the information appear to be valid and well researched?</li> <li>• Can it be supported by evidence?</li> <li>• Can the information be verified through other sources?</li> <li>• Is there a non-web equivalent of this material that could be used to verify the information?</li> <li>• Does the URL (web address) give you any indication of the source of the information</li> </ul>
<b>Accuracy</b>	<ul style="list-style-type: none"> <li>• Is there an indication as to who has responsibility for the accuracy of the information provided?</li> <li>• Do you know if the information has been reviewed?</li> <li>• Are there grammatical, spelling or typographical errors? If there are, what does this suggest about the source?</li> <li>• Is there a bibliography</li> </ul>
<b>Objectivity</b>	<ul style="list-style-type: none"> <li>• Is the information fact or opinion?</li> <li>• Is the language used free of bias?</li> <li>• Is the author’s point of view objective or do they make it clear when they are expressing a personal opinion?</li> <li>• Is it a personal website?</li> </ul>

	<ul style="list-style-type: none"> <li>• Is the author affiliated with any institution or organization which might create a bias in the information?</li> </ul>
<b>Currency</b>	<ul style="list-style-type: none"> <li>• Is the information kept up-to-date?</li> <li>• Is there any indication of when the information was last updated?</li> <li>• Are any links up to date and working?</li> </ul>

These hints could equally apply to print resources. Finally, the key point to remember, if students do use information that is found on the internet, is that they are responsible for ensuring that it is both reliable and accurate

### **Use of computer programs**

The use of computers is encouraged where they are appropriate as tools for analysing data relevant to the subject of the extended essay. Material such as a hard copy of computer output may be included in the extended essay, but any associated program should be referred to or reproduced, if original, only as an appendix.

Computer programs may only be included (in particular circumstances) in computer science and physics essays. See the [“Computer science”](#) and [“Physics”](#) sections for further details:

[https://ibpublishing.ibo.org/extendedessay/apps/dpapp/guidance.html?doc=d\\_0\\_eevyy\\_gui\\_1602\\_1\\_e&part=5&chapter=4&section=3](https://ibpublishing.ibo.org/extendedessay/apps/dpapp/guidance.html?doc=d_0_eevyy_gui_1602_1_e&part=5&chapter=4&section=3)

[https://ibpublishing.ibo.org/extendedessay/apps/dpapp/guidance.html?doc=d\\_0\\_eevyy\\_gui\\_1602\\_1\\_e&part=5&chapter=6&section=3](https://ibpublishing.ibo.org/extendedessay/apps/dpapp/guidance.html?doc=d_0_eevyy_gui_1602_1_e&part=5&chapter=6&section=3) )

## Assessment of the EE

### Overview of the assessment criteria for the EE

<b>Criterion A:</b> Focus and method	<b>Criterion B</b> Knowledge and understanding	<b>Criterion C</b> Critical thinking	<b>Criterion D</b> Presentation	<b>Criterion E</b> Engagement
Topic Research question Methodology	Context Subject-specific terminology and concepts	Research Analysis Discussion and evaluation	Structure Layout	Process Research focus
<b>Marks</b>	<b>Marks</b>	<b>Marks</b>	<b>Marks</b>	<b>Marks</b>
6	6	12	4	6

TOTAL MARKS AVAILABLE : 34

The details about all the mentioned criteria are provided in the EE Guide. The link:

[https://ibpublishing.ibo.org/extendedessay/apps/dpapp/guide.html?doc=d\\_0\\_eeyyy\\_gui\\_1602\\_1\\_e&part=6&chapter=6&section=1](https://ibpublishing.ibo.org/extendedessay/apps/dpapp/guide.html?doc=d_0_eeyyy_gui_1602_1_e&part=6&chapter=6&section=1)

### Assessment grade descriptors

#### Grade A

Demonstrates effective research skills resulting in a well-focused and appropriate research question that can be explored within the scope of the chosen topic; effective engagement with relevant research areas, methods and sources; excellent knowledge and understanding of the topic in the wider context of the relevant discipline; the effective application of source material and correct use of subject-specific terminology and/or concepts further supporting this; consistent and relevant conclusions that are proficiently analysed; sustained reasoned argumentation supported effectively by evidence; critically evaluated research; excellent presentation of the essay, whereby coherence and consistency further supports the reading of the essay; and present and correctly applied structural and layout elements.

**Engagement with the process is conceptual and personal, key decision-making during the research process is documented, and personal reflections are evidenced, including those that are forward-thinking.**

#### Grade B

Demonstrates appropriate research skills resulting in a research question that can be explored within the scope of the chosen topic; reasonably effective engagement with relevant research areas, methods and sources; good knowledge and understanding of the topic in the wider context of the relevant discipline; a reasonably effective application of source material and use of subject-specific terminology and/or concepts; consistent conclusions that are accurately analysed; reasoned argumentation often supported by evidence; research that at times evidences critical evaluation; and a clear presentation of all structural and layout elements, which further supports the reading of the essay.

**Engagement with the process is generally evidenced by the reflections and key decision-making during the research process is documented.**

### **Grade C**

Demonstrates evidence of research undertaken, which has led to a research question that is not necessarily expressed in a way that can be explored within the scope of the chosen topic; partially effective engagement with mostly appropriate research areas, methods and sources—however, there are some discrepancies in those processes, although these do not interfere with the planning and approach; some knowledge and understanding of the topic in the wider context of the discipline, which is mostly relevant; the attempted application of source material and appropriate terminology and/or concepts; an attempted synthesis of research results with partially relevant analysis; conclusions partly supported by the evidence; discussion that is descriptive rather than analytical; attempted evaluation; satisfactory presentation of the essay, with weaknesses that do not hinder the reading of the essay; and some structural and layout elements that are missing or are incorrectly applied.

**Engagement with the process is evidenced but shows mostly factual information, with personal reflection mostly limited to procedural issues.**

### **Grade D**

Demonstrates a lack of research, resulting in unsatisfactory focus and a research question that is not answerable within the scope of the chosen topic; at times engagement with appropriate research, methods and sources, but discrepancies in those processes that occasionally interfere with the planning and approach; some relevant knowledge and understanding of the topic in the wider context of the discipline, which are at times irrelevant; the attempted application of source material, but with inaccuracies in the use of, or underuse of, terminology and/or concepts; irrelevant analysis and inconsistent conclusions as a result of a descriptive discussion; a lack of evaluation; presentation of the essay that at times is illogical and hinders the reading; and structural and layout elements that are missing.

**Engagement with the process is evidenced but is superficial, with personal reflections that are solely narrative and concerned with procedural elements.**

### **Grade E (failing condition)**

Demonstrates an unclear nature of the essay; a generally unsystematic approach and resulting unfocused research question; limited engagement with limited research and sources; generally limited and only partially accurate knowledge and understanding of the topic in the wider context of the relevant discipline; ineffective connections in the application of source material and inaccuracies in the terminology and/or concepts used; a summarizing of results of research with inconsistent analysis; an attempted outline of an argument, but one that is generally descriptive in nature; and a layout that generally lacks or incorrectly applies several layout and structural elements.

**Engagement with the process is limited, with limited factual or decision-making information and no personal reflection on the process.**

## Supervision and reflection process

The process of writing and completing the extended essay requires planned and structured supervision and reflection. Supervision means that students are supported by their supervisors through the process of independent research.

Reflection involves student's engagement and progress during the planning, research and writing process. The aim of the reflection process is to develop student's critical thinking skills, research skills, self-management skills, conceptual understanding and decision-making.

### The difference between supervision sessions and reflection sessions

SUPERVISION or CHECK-IN SESSIONS	REFLECTION SESSIONS
<ul style="list-style-type: none"> <li>Tailored to the needs of the student and the supervisor's requirements</li> <li>Not formally reported on the <i>Reflections on planning and progress form</i></li> <li>May differ in length: occasional 10-minute check-in or longer discussions of some important elements of the EE</li> <li>Not mandatory but highly recommended</li> </ul>	<ul style="list-style-type: none"> <li>3 Formal mandatory sessions</li> <li>Recorded on the <i>Reflections on planning and progress form</i></li> <li>Should last 20-30 minutes</li> <li>Students should be prepared – share excerpts from their Researcher's reflection space with the supervisor</li> <li>After the session, students complete the relevant comment session on the form and submit to the supervisor</li> </ul>

### Reflection sessions and researcher's reflection space

REFLECTION SESSION	STUDENT'S PREPARATION	DISCUSSION WITH THE SUPERVISOR
<b>The first formal reflection session</b>	<ul style="list-style-type: none"> <li>do some initial background reading into a subject and topic of your choice</li> <li>read the subject-specific section of the Extended essay guide for the subject of your choice</li> <li>undertake further background reading –focus on valid sources</li> <li>check availability and reliability of valid sources</li> <li>begin developing a research proposal (MindMapt, preliminary bibliography)</li> <li>prepare and send your supervisor and outline of your research proposal</li> </ul>	<ul style="list-style-type: none"> <li>a review of the requirements and assessment criteria for the subject</li> <li>a review of ethical and legal implications, if applicable</li> <li>a dialogue about possible approaches and any potential problems that might arise</li> <li>a discussion of strategies for developing the student's ideas for the essay and expanding the research</li> <li>probing and challenging questions that will help the student focus and develop a working research question</li> <li>an outline of the next steps in order to refine the research question</li> </ul>
<b>The interim reflection session</b>	<ul style="list-style-type: none"> <li>attempt to refine a focused and appropriate <a href="#">research question</a></li> <li>significantly deepen the research and recorded pertinent evidence, information or data in the <a href="#">Researcher's reflection space</a></li> <li>review and consolidate the methodologies</li> <li>formulated arguments based on the collected evidence</li> </ul>	<ul style="list-style-type: none"> <li>the student's understanding of the academic writing requirements and referencing formats</li> <li>an appropriate range of sources and the student's critical evaluation of the origin of sources</li> <li>a clear and refined <a href="#">research question</a></li> <li>a viable argument on which to base the essay</li> </ul>

	<ul style="list-style-type: none"> <li>• add to the working bibliography</li> <li>• complete and turn in the first draft</li> </ul>	<ul style="list-style-type: none"> <li>• a clear vision for the final steps in the writing process.</li> </ul>
<b>The final reflection session Viva voce</b>	<ul style="list-style-type: none"> <li>• Turn in the final version prior to the session so that the supervisor can check it</li> <li>• Bring extracts from their RRS that illustrate their growth as learners through the process of reflection</li> <li>• Show a willingness to share their personal experience</li> <li>• discuss the skills and development of conceptual understandings that they have acquired through the completion of the extended essay</li> </ul>	<ul style="list-style-type: none"> <li>• ask the student a variety of open-ended questions to elicit holistic evidence of the student's learning experience.</li> <li>• an opportunity for the <i>supervisor</i> to confirm the <a href="#">authenticity</a> of the student's ideas and sources</li> <li>• an opportunity to reflect on successes and difficulties encountered in the research process</li> <li>• an aid to the supervisor's comments on the <i>Reflections on planning and progress form</i></li> </ul>

### Accommodating a change of direction

If the student or supervisor is not satisfied that the goals of the research are being met, further supervision sessions may be appropriate.

Students who find that they need to change direction in their research or adjust the formulation of their research question should demonstrate the thinking that led them to these decisions in their second reflection on the *Reflections on planning and progress form*.

### Commenting on a draft version of the extended essay

Commenting on one completed draft of the essay is a very important aspect of the latter stages in the process, and the last point at which the supervisor sees the essay before it is finally uploaded for submission.

The best way of conducting this last stage is for the student to submit the essay prior to a supervision session to allow the supervisor to add their comments. This should be followed by a one-to-one discussion between the supervisor and the student in which they go through the comments together, but this first draft must not be heavily annotated or edited by the supervisor.

### Final reflection session (viva voce)

The *viva voce* is a short interview between the student and the supervisor, and is the mandatory conclusion to the extended essay process. Students who do not attend the *viva voce* will be disadvantaged under criterion E (engagement) as the *Reflections on planning and progress form* will be incomplete.

The *viva voce* is conducted once the student has uploaded the final version of their extended essay to the IB for assessment. At this point in the process no further changes can be made to the essay. The *viva voce* is a celebration of the completion of the essay and a reflection on what the student has learned from the process.

The *viva voce* should last 20–30 minutes. This is included in the recommended amount of time a supervisor should spend with the student.

## **Authenticating student work**

All extended essays submitted to the IB for assessment must be authenticated by the student and supervisor and must not include any known instances of suspected or confirmed academic misconduct. Once a student has uploaded the final version of their extended essay to the e-coursework system for assessment, and confirmed the authenticity of it, it is submitted via the system to their supervisor.

The *Reflections on planning and progress form* is given to the supervisor by the student, signed and dated, and it is the responsibility of the supervisor to upload this to the e-coursework system.

Work that is submitted but does not comply with the expectations and requirements outlined in this publication will be treated as a case of academic misconduct.

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## Appendix

### Sample Research Questions

SUBJECT	Research Question
<b>Croatian A</b>	<p>Koje su sličnosti i razlike između drame <i>Adam i Eva</i> Miroslava Krležje i drame <i>Pustolov pred vratima</i> Milana Begovića?</p> <p>Koja su temeljna obilježja likova intelektualaca u zbirci novela <i>Veliki meštar sviju hulja</i> Miroslava Krležje?</p> <p>Koliko su problemi siromaštva i njegovih posljedica iz pripovijedaka Vjenceslava Novaka aktualni danas?</p> <p>Kako odabir stila doprinosi karakterizaciji likova u romanima <i>Olga i Lina te Gospođa Sabina</i> Eugena Kumičića?</p>
<b>English B</b>	<p>Category 2 Culture and society: How does the popularity of satire journalism such as The Daily Show amongst youth demonstrate the identity and interests of Millennials in the USA?</p> <p>Category 3 Literature: To what extent do Amie Kaufman and Jay Kristoff succeed in overcoming the limitations of multimedia epistolary format of "Illuminae" in order to effectively use characterisation and portray character development?</p> <p>How does J.K. Rowling use writing techniques to portray good and evil in the character of Severus Snape throughout the three final books in the Harry Potter series?</p>
<b>Psychology</b>	<p>To what extent does bilingualism benefit executive cognitive function?</p> <p>To what extent is it possible to predict the durability of a marriage?</p>
<b>Biology</b>	<p>To what extent would introduction of the dengue virus in Croatia pose an endangerment of citizens in the next forty years (2019-2059), due to the increase in population of vectors of the disease, Asian tiger mosquitoes (<i>Aedes albopictus</i>)?</p> <p>How do different concentrations of copper(II) sulfate pentahydrate (0,00, 0,05, 0,10, 0,15, 0,20 and 0,25mol/L) affect chlorophyll a+b(µg/mg(fresh weight)) and proline (µmol/g(fresh weight)) concentrations measured by Vernier's SpectroVis Plus spectrophotometer as well as germination percentage(%) and height(cm) measured by ruler, of common wheat (<i>Triticum aestivum</i> L.) after 19 days of growth?</p> <p>How does exposure to different concentrations of colloidal silver (50, 100, 150, 200 and 250 ppm) affect the growth of bacteria indirectly measured through difference between initial optical density and final optical density of a LB liquid medium containing <i>Escherichia coli</i> (ATCC® 25922™) colonies after growing for 72 hours in 25 °C measured by spectrophotometer at 600.3 nm?</p>

<b>Geography</b>	<p>To what extent is Township of Langley's corporate waste management program effective, demonstrating environmental sustainability? - iako bi Varaždin bio puno bolji primjer :)</p> <p>To what extent is the usage of solar energy in the Biskupec suburb in Varazdin (Croatia) different from the chosen suburbs in Cambridge (UK) and Karlsruhe (Germany)?</p> <p>What are the effects of the development of accommodation and transportation infrastructure on the development of tourism in Varaždin (Croatia) and comparison with Ptuj (Slovenia)?</p>
<b>ESS</b>	<p>What are the effects of agroforestry and soybean monocropping on soil and water quality, and species biodiversity in the Cerrado biome, Brazil?</p> <p>What are the criteria that may be used to evaluate the sustainability of Marine Turtle conservation projects and why?</p> <p>To what extent has the 1995 reintroduction of grey wolfs (<i>Canis lupus</i>) in Yellowstone National Park affected Ecotourism in the Greater Yellowstone Area?</p>
<b>Computer Science</b>	<p>To what extent are support vector machines more accurate than artificial neural networks at predicting ATP tennis matches?</p> <p>To what extent is file size affected by compressing data using the Lempel Ziv Markov Chain 2 Algorithm rather than sorting and compressing data using the Burrows Wheeler Transform and Huffman Encoding Algorithms?</p> <p>To what extent are pseudo-random numbers generated in Java more predictable than ones generated in C#?</p> <p>To what extent does MP3 encoding minimize quality loss and file size more efficiently than OGG in terms of algorithmic efficiency and quality of the encoded file?</p>
<b>Visual Arts</b>	<p>What is the role of using visual techniques to communicate emotion in the graphic novel <i>Blankets</i> and manga <i>Oyasumi Punpun</i>?</p> <p>To what extent did the beginning of Communism in Soviet Union during 1920s influence divergent approach to art between Suprematist Kazimir Malevich and Constructivist Alexander Rodchenko?</p> <p>To what extent does the use of color differ in André Derain's Charing Cross Bridge and Wassily Kandinsky's Composition IV?</p>