

Extended essay guide

First assessment 2027

Extended essay guide

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Diploma Programme

Extended essay guide

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IB mission statement

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

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Purpose of this document

First assessment 2027

This publication is intended to guide the planning, supervision and assessment of the extended essay in schools. Extended essay coordinators, supervisors and students are the audience.

This guide can be found on the subject page of the Programme Resource Centre at resources.ibo.org, a password-protected International Baccalaureate (IB) website designed to support IB teachers. It can also be purchased from the IB store at store.ibo.org.

Additional resources

Additional publications such as support materials, examination session reports and grade descriptors can also be found on the Programme Resource Centre.

Educators are encouraged to check the Programme Resource Centre for additional resources created or used by other educators.

Acknowledgement

The IB wishes to thank educators and associated schools for generously contributing time and resources to the production of this guide.

How to use this document

A document both for students and teachers

Some subsections of this *Extended essay guide* are written with the intention that students will be the primary readers, but supervisors and others are included in the intended audience for this material.

The student-centred subsections are listed below, under the following two main sections.

- **Extended essay pathways**
 - Overview of extended essay pathways
 - The interdisciplinary pathway
 - The subject-focused pathway
 - Generic guidance for the extended essay
 - Subject-specific guidance
- **Researching and writing the extended essay**
 - The researching and writing process
 - The ethical researcher
 - Reflection and the extended essay

Other sections and subsections of the guide are written with the intention that supervisors will be the primary readers. But students are also included in the intended audience for some sections and subsections, particularly those listed below.

- **Introduction**
 - The extended essay in an IB context
- **About the extended essay** (the complete section)
- **Researching and writing the extended essay**
 - Support and supervision of the extended essay
- **Assessment**
 - Assessment in the Diploma Programme (the complete sub-section)

The aim of the student-focused approach to the content of specific sections is to support the positive, personal engagement of students with their extended essay experience.

The extended essay in an IB context

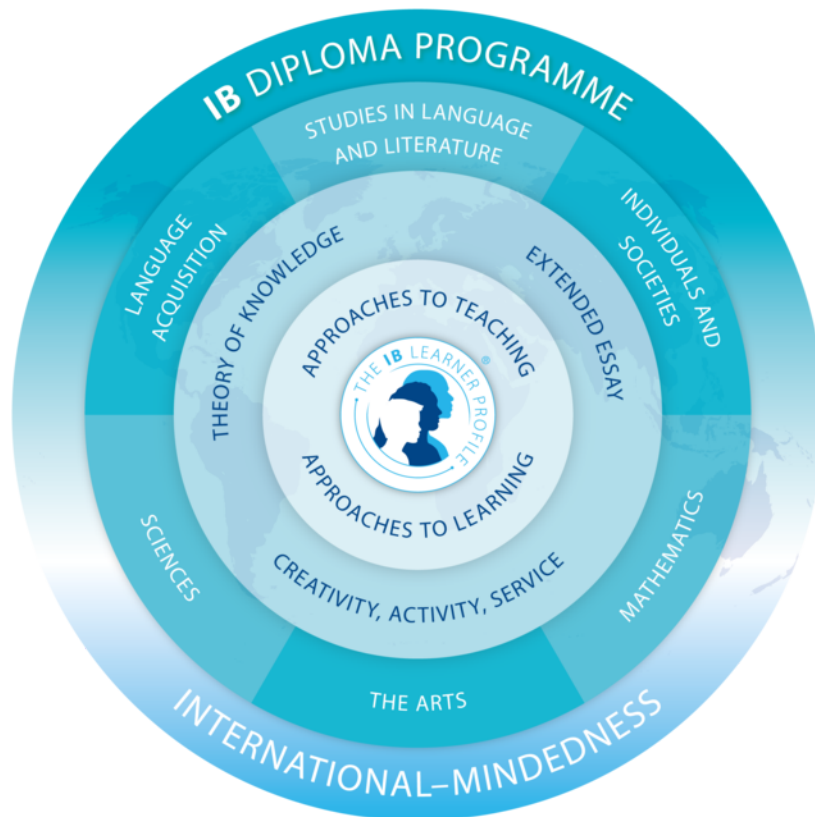
The Diploma Programme

The extended essay is an element of the core of the Diploma Programme (DP), which is a rigorous pre-university course of study designed for students in the 16 to 19 age range. It is a broad-based, two-year course that aims to encourage students to be knowledgeable and inquiring but also caring and compassionate. There is a strong emphasis on encouraging students to develop intercultural understanding, open-mindedness and the attitudes necessary for them to respect and evaluate a range of points of view.

The Diploma Programme model

The course is presented as six academic areas enclosing a central core (see figure 1). It encourages the concurrent study of a broad range of academic areas. Students study two modern languages (or a modern language and a classical language), a humanities or social science subject, an experimental science, mathematics and one of the creative arts. It is this comprehensive range of subjects that makes the DP a demanding course of study designed to prepare students effectively for university entrance. In each of the academic areas, students have flexibility in making their choices, which means they can choose subjects that particularly interest them and that they may wish to study further at university.

Figure 1
Diploma Programme model



Choosing the right combination

Students are required to choose one subject from each of the six academic areas, although they can, instead of an arts subject, choose two subjects from another area. Normally, three subjects (and not more than four) are taken at higher level (HL), and the others are taken at standard level (SL). The IB recommends 240 teaching hours for HL subjects and 150 hours for SL. Subjects at HL are studied in greater depth and breadth than at SL.

At both levels, many skills are developed, especially those of critical thinking and analysis. At the end of the course, students' abilities are measured by means of external assessment. Many subjects contain some element of coursework assessed by teachers.

The core of the Diploma Programme model

All DP students participate in the three course elements that make up the core of the model.

Theory of knowledge (TOK) is a course that is fundamentally about critical thinking and inquiry into the process of knowing rather than about learning a specific body of knowledge. The TOK course examines the nature of knowledge and how we know what we claim to know. It does this by encouraging students to analyse knowledge claims and explore questions about the construction of knowledge. The task of TOK is to emphasize connections between areas of shared knowledge and link them to personal knowledge in such a way that an individual becomes more aware of their own perspectives and how they might differ from others.

In TOK, students explore the means of producing knowledge within the core theme of “knowledge and the knower” as well as within various optional themes (knowledge and technology, knowledge and politics, knowledge and language, knowledge and religion, and knowledge and indigenous societies) and areas of knowledge (the arts, natural sciences, human sciences, history and mathematics). The course also encourages students to make comparisons between different areas of knowledge and to reflect on how knowledge is arrived at in the various disciplines, what the disciplines have in common, and the differences between them.

Creativity, activity, service (CAS) is at the heart of the DP. The emphasis in CAS is on helping students to develop their own identities, in accordance with the ethical principles embodied in the IB mission statement and the IB learner profile. CAS involves students in a range of activities alongside their academic studies throughout the DP. The three strands of CAS are creativity (arts and other experiences that involve creative thinking), activity (physical exertion contributing to a healthy lifestyle) and service (an unpaid and voluntary exchange that has a learning benefit for the student). Possibly, more than any other component in the DP, CAS contributes to the IB’s mission to create a better and more peaceful world through intercultural understanding and respect.

The **extended essay** offers the opportunity for IB students to investigate, under the guidance of a supervisor, a topic of personal interest, in the form of a 4,000-word academic essay that acquaints them with the independent research and writing skills expected at university. A subject-focused pathway sees students explore an area of research related to one of their six DP subjects, while an interdisciplinary pathway combines two DP subjects. The extended essay is intended to develop high-level research and writing skills, intellectual discovery and creativity.

Coherence in the core

The three elements of the core were introduced by the original curriculum designers of the DP as a way to educate the whole person. The IB is strongly committed to the principle of developing the whole person, and believes this is best achieved by identifying and developing clearer and more explicit aims for, and relationships between, these three elements. Specifically, the IB believes a coherent view of the core will support:

- the interconnectedness of learning
- the IB learner profile and other elements of an IB education
- a broader view of the subject disciplines.

More guidance on connecting the elements of the core can be found in the [Extended essay support material](#).

The extended essay and the IB continuum

The learner profile, central to all IB programme experiences, presents both an achievable and aspirational reflection and application of the IB’s mission statement. Inquiry is both an attribute of the IB learner profile and central to learning. The spirit of inquiry, manifest in students’ enthusiasm for investigating topics of interest to them and exploring creative ways to approach important issues, is a predeterminant for working on the extended essay.

Other IB programmes also have a concluding project. For students looking back on their experiences in earlier years, a connection can be made with the inquiring focus of the Primary Years Programme (PYP) exhibition and the Middle Years Programme (MYP) personal project. Similarly, the reflective project is a compulsory component of the IB Career-related Programme (CP) core; the aims and requirements of this project have many similarities to the DP extended essay.

The thread of personal research linked to public and personal knowledge is key to the formative experiences of IB students, providing them with skills, aptitudes and experiences that enable them to navigate the challenges and enjoyment of higher education and future careers. Learning does not end there for IB students; it then segues into lifelong learning.

Student experiences in other IB programme projects

PYP exhibition

The exhibition is a student-driven culminating experience in the final year of the PYP. Students are required to engage in a collaborative, transdisciplinary inquiry process that involves them in identifying, exploring, documenting and sharing their understanding of an issue or matter of personal significance. PYP students are encouraged to reflect on their exhibitions in a constructive way by making regular entries in a journal of all their ideas, decisions and actions. In this way, they record their progress and how their understanding of the issue under investigation is developing. Process rather than product is the emphasis in the exhibition.

MYP personal project

Personal projects are developed and completed by individual students but may involve group work. While the product or outcome may be created collaboratively, each student's individual contribution and process must be apparent. Group projects that allow students to take responsibility individually for different aspects of the project are also possible, although the personal project is always assessed individually for each student. Short sections from a process journal that exemplify the knowledge, processes and skills the student has developed through the project need to be submitted to the student's supervisor for assessment or to the IB for moderation.

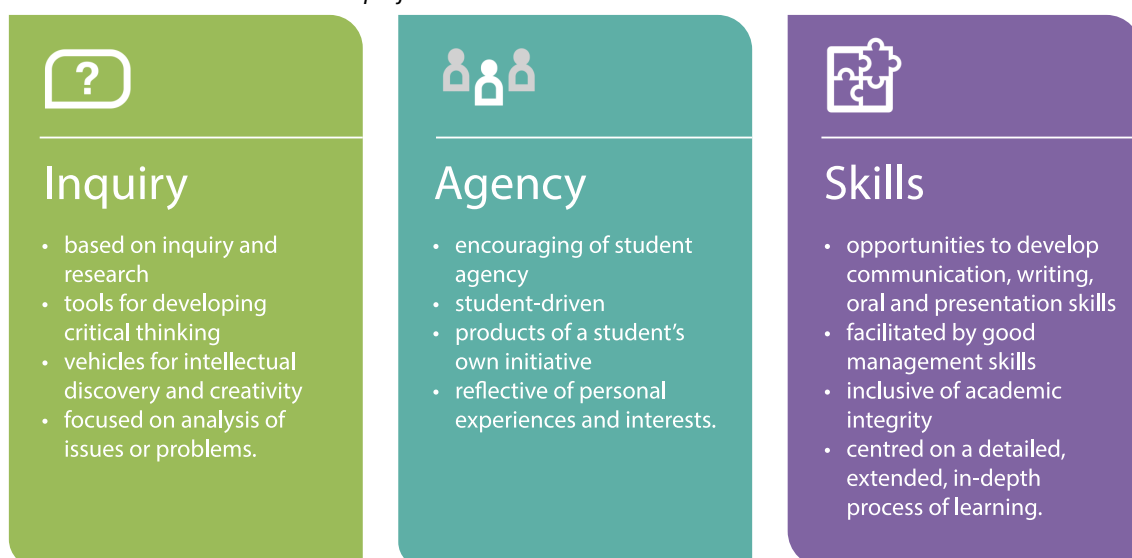
CP reflective project

The reflective project is an in-depth inquiry produced over an extended period of time. It is the product of the student's own initiative and should reflect their personal experience in the programme. It promotes high-level research, writing and extended communication skills and creativity through a variety of different approaches and formats. The reflective project offers different modes of presentation to reflect the realities of the world of work. The reflective project focuses on an ethical dilemma related to an issue directly linked to the student's career interests, with an attendant high level of analysis. Students use a learning journal to keep a record of their learning; the journal is included with the final product. They use the journal to help record their reflections on the process of undertaking and completing the reflective project. The student also liaises with an adult supervisor or mentor.

A review of the vignettes above, together with a reading of this *Extended essay guide*, show that these research projects have common features (see figure 2). They are:

Figure 2

Research projects in the IB continuum have common features



The extended essay builds on skills developed in the PYP and MYP

The extended essay embodies skills and experiences developed through the IB continuum. Informed by the IB approaches to learning and approaches to teaching, students develop transferable skills related to inquiry: research, self-management, agency and reflection (see figure 3).

Figure 3
The IB learning progression: Transferable skills



These broad skills areas can be broken down further, as shown in the table below.

Research	Agency	Self-management	Reflection
Generating and answering questions	Creative thinking	Time management	Reflective thinking
Close reading	Reasoning	Academic integrity skills	Open-mindedness
Information literacy skills	Developing an argument	Self-regulation	Critical thinking
Digital literacy skills	Communication skills	Decision-making	Reflexivity
Analysis and synthesis	Evaluation	Ethical practice	Summarizing

Many of these skills inform two important aspects of the extended essay: research and reflection.

Research

With a heritage of inquiry and thinking skills from the PYP, a student is supported as they progress through the IB continuum with additions, refinements and enhancements to a growing skills set under the umbrella of research skills. They will increasingly become aware that, just like a magnet, associated skills (e.g.

communication skills) and proficiency in more sophisticated levels of skills are attracted to the core elements. Although the extended essay is not the only aspect of the DP in which students apply their understanding of research skills, arguably it provides the most comprehensive expression of the research skills set.

Reflection

The extended essay enables students to use reflective skills nurtured and refined in the concluding projects of IB programmes designed for younger students. From developing agency in the PYP, students can now use their accumulated store of skills, understandings and experiences of reflection in a formal academic context—the extended essay—that pays significant attention to the research process and the various perspectives arising out of a certain line of inquiry. Reflection as a specific element of the extended essay also asks students to think about how they could apply the skills they have learned in different contexts, present and future.

Development of research and reflection skills in the PYP, MYP and elsewhere provides an excellent platform for students to develop these skills further in the extended essay and in the DP in general. However, it is also true that students who bring to their DP studies experience from other curriculum backgrounds can be equally successful researchers and writers of an extended essay.

The extended essay and the IB learner profile

The DP aims to develop in students the knowledge, skills and attitudes they will need to fulfil the aims of the IB, as expressed in the organization’s mission statement and the learner profile. Learning and teaching in the DP represent the reality in daily practice of the organization’s educational philosophy.

The table below shows some of the links between the extended essay and the learner profile attributes.

Attribute	Connection to the extended essay
Inquirers	Through research, students activate their interest in learning and apply the skills necessary to conduct inquiry.
Knowledgeable	Students acquire in-depth knowledge of their topic through exploration of current literature and/or research.
Thinkers	Students make reasoned analysis of their research topic and apply critical thinking skills in a creative way.
Communicators	Students effectively express ideas and information in an academic way.
Principled	As ethical researchers, students exercise academic integrity in all aspects of their work, showing respect for the ideas and work of others.
Open-minded	As researchers, students explore and include an appropriately wide range of points of view.
Caring	By clearly demonstrating the relevance of their topic, students exhibit their personal commitment to making a difference in the lives of others.
Risk-takers	Students explore new areas or novel situations and courageously defend their positions.
Balanced	Students’ understanding of the importance of intellectual development is reinforced by the research process.
Reflective	Students draw well-evidenced, considered conclusions on their topic, and reflect on the transformative nature of their extended essay experience.

Approaches to learning and approaches to teaching in the DP

Approaches to learning and approaches to teaching across the DP refer to deliberate strategies, skills and attitudes that permeate the learning and teaching environment. These approaches and tools, intrinsically linked with the learner profile attributes, enhance student learning and assist student preparation for the DP assessment and beyond. The aims of approaches to learning and approaches to teaching in the DP are to:

- empower teachers as teachers of students as well as teachers of content
- empower teachers to create clearer strategies for facilitating learning experiences in which students are more meaningfully engaged in structured inquiry and greater critical and creative thinking
- promote both the aims of individual subjects (making them more than course aspirations) and linking previously isolated knowledge
- encourage students to develop an explicit variety of skills that will equip them to continue to be actively engaged in learning after they leave school, and to help them not only obtain university admission through better grades but also prepare for success during tertiary education and beyond
- enhance further the coherence and relevance of the students' DP experience
- allow schools to identify the distinctive nature of a DP education, with its blend of idealism and practicality.

The five approaches to learning (developing thinking skills, social skills, communication skills, self-management skills and research skills) along with the six approaches to teaching (teaching that is inquiry-based, conceptually focused, contextualized, collaborative, differentiated and informed by assessment) encompass the key values and principles that underpin IB pedagogy.

Approaches to teaching for the extended essay

Inquiry and the extended essay

The extended essay is perhaps the most inquiry-based activity that DP students will undertake, given that it is an open-ended task, driven by student interest. The extended essay inspires students to examine a topic that matters to them in an in-depth and meaningful way. Students choose what they want to research, decide on an appropriate research method, and engage in independent inquiry with the support of their supervisors. They develop important, transferable skills, such as planning, time management, decision-making and critical thinking, along with the qualities of perseverance and resilience.

Conceptual understanding and the extended essay

In the extended essay, concepts play an important role in helping to frame the focus of the research that students are undertaking, and in demonstrating their knowledge and understanding. Students who can engage critically in discussion about the concepts relevant to their area of research can demonstrate at a deep level how different aspects of their learning are connected.

Local and global contexts and the extended essay

In extended essays, contemporary examples, case studies and real-life engagement with local and global issues can bring students' research to life. These issues tend to be dynamic, varied and present at all levels of global social organization: global issues have local ramifications and local issues are often a part of a wider phenomenon. An interdisciplinary approach is worth considering if students wish to focus on a contemporary issue of global significance.

Effective teamwork, collaboration and the extended essay

Although the extended essay is an independent task, students are guided through the process by a supervisor. The supervision and reflection process ensures that students are given the opportunity to explore ideas, issues and challenges in a supportive environment. Students engage in discussions with their supervisor about the direction and progress of their research.

Meeting the needs of all students and the extended essay

Although the extended essay is an independent research experience, supervisors play an important role in guiding students to choose areas of research that allow them to make the most of their interests and abilities. Supervisors can offer guidance and support at different levels for different students. For example, some students may not require the full five hours of supervision time permitted, whereas others will.

At the beginning of the process, the DP or extended essay coordinator may provide to students differentiated learning materials related to research methods and academic integrity, for example, study skills classes focused on research or note-taking, or reading materials related to these.

Informed by assessment and the extended essay

Students should have access to the assessment criteria from the beginning of the process, so that they are clear about how their work will be assessed and can use the criteria to inform their research and writing. They can also view examples of assessed extended essays with commentaries from examiners.

Approaches to learning for the extended essay

Thinking skills and the extended essay

In the extended essay, thinking skills allow students to demonstrate a deep understanding of a specific area of research. Metacognition is an embedded skill in the DP; in the extended essay, critical thinking and reflection skills have a central role. As students research, they engage with different sources of information and data, becoming exposed to different and new perspectives. They need to engage with their research in an analytical and evaluative way. Further, the important skill of reflection is developed through structured sessions with supervisors, allowing students to articulate what they have learned from the research process and the overall extended essay experience, identifying how they can transfer learned skills to other areas of their studies and potential future experiences.

Communication skills and the extended essay

The extended essay requires students to demonstrate their ability to communicate their findings on a research topic of their choice in a specific way: as an academic paper. Arguments need to be formulated clearly and coherently, and conclusions that are well evidenced need to be made.

During sessions with their supervisor, students develop the ability to communicate their research ideas, progress, successes and challenges, both orally and as a summative reflection on their reflections and progress form (RPF). The researcher's reflection space (RRS) can make use of a range of different communication techniques, digital and other, to record students' thoughts, ideas, progress, timelines and arguments.

Social skills and the extended essay

There are strong links between social skills and the affective skills associated with self-management, an important part of the extended essay experience. Students are managing a substantial task, not only in terms of workload and timelines but also in terms of intellectual challenge. Supervisors can assist by suggesting a variety of strategies to help support and guide students through the process. Developing a good working relationship with their supervisor is an important aspect of students' skills development in this area.

Self-management skills and the extended essay

The extended essay is a substantial, independent piece of research, so students need to identify and develop the necessary self-management skills to help them do their best work. Supervisors provide support and guidance, but the overall extended essay experience is owned and driven by the student. As such, being able to navigate the research and writing of the essay independently is important. The benefits of these skills are immediately recognizable when students move on to university and the workplace, where they are expected to manage their workloads and competing priorities.

Aspects of the extended essay that develop students' self-management skills include:

- establishing a schedule of achievable deadlines, managing expectations
- guidance and support regarding study techniques, such as time management, note-taking, mind mapping and effective, well-managed use of digital devices
- maintaining an RRS as a planning and progress tool
- supervision and reflection sessions that provide an opportunity for students to discuss their progress.

Research skills and the extended essay

The extended essay provides an ideal opportunity for students to develop and demonstrate research skills. Research methods chosen need to be appropriate for the area of inquiry and choice of topic. Students will also need to undertake a literature review that forms their knowledge and understanding in context, requiring them to make informed choices about the relevance, reliability and validity of secondary source materials. To be an ethical researcher, it is very important that students adhere to IB policy and take guidance from their supervisor, especially regarding academic integrity. Developing effective citation and referencing skills is also paramount.

Learning diversity and learning support requirements

Schools must ensure that equal access arrangements and reasonable adjustments are made for students with learning support requirements, in line with the IB documents *Access and inclusion policy* and *Learning diversity and inclusion in IB programmes: Removing barriers to learning*.

The documents *Meeting student learning diversity in the classroom* and *The IB guide to inclusive education: a resource for whole school development* are available to support schools in the ongoing process of increasing access and engagement by removing barriers to learning.

Academic integrity

Academic integrity in the DP is a set of values and behaviours informed by the attributes of the learner profile. In learning, teaching and assessment, academic integrity serves to promote personal integrity, engender respect for the integrity of others and their work, and ensure that all students have an equal opportunity to demonstrate the knowledge and skills they acquire during their studies.

All coursework—including work submitted for assessment—is to be authentic, based on the student's individual and original ideas, with the ideas and work of others fully acknowledged. Assessment tasks that require teachers to provide guidance to students or that require students to work collaboratively must be completed in full compliance with the detailed guidelines provided by the IB for the relevant subjects.

For further information on academic integrity in the IB and the DP, please consult the IB publications *Academic integrity policy*, *Effective citing and referencing*, *Diploma Programme: From principles into practice* and the general regulations in *Diploma Programme Assessment procedures*. Specific information regarding academic integrity as it pertains to the extended essay can be found in this guide.

Acknowledging the ideas or work of another person

Coordinators and teachers are reminded that students must acknowledge all sources used in work submitted for assessment. A student's failure to acknowledge a source is likely to be investigated by the IB as a potential breach of regulations that may result in a penalty imposed by the IB Final Award Committee.

More guidance on acknowledging the work or ideas of other people can be found later in this guide in the section "[Completing and submitting the RPF](#)".

Nature of the extended essay

The extended essay is a unique opportunity for student-led, academic exploration of a topic of personal interest. Students demonstrate their intellectual initiative either through an in-depth inquiry within the boundaries of a Diploma Programme (DP) subject, or by investigating a topic using an interdisciplinary approach. The extended essay brings students the excitement of intellectual exploration while helping them to develop important, transferable skills in research, critical thinking, reflection and self-management. Reflection on the research process enables students to gain a deep understanding of their intellectual and personal learning achievements.

An important aim of the DP core is for the extended essay to support and be supported by the students' work in their chosen subjects. In supporting this aim, the extended essay sees students referring to a DP subject or subjects as they formulate a focused research question, collect, interpret and evaluate evidence, construct a reasoned argument and draw informed conclusions. In exploring a topic of personal interest via either the subject-focused approach or the interdisciplinary approach, students aim to demonstrate knowledge and understanding of relevant DP subjects, applying appropriate methods, concepts and theories and using suitable terminology. Guided through this process by a supervisor, students are encouraged to reflect on insights gained, evaluate decisions and respond to challenges encountered during the research.

Researching and writing an extended essay is a challenging and rewarding experience that prepares students for different pathways beyond the DP by developing skills valued by both university educators and employers. In contributing to the development of inquiring, critical, reflective, lifelong learners, the extended essay embodies the essence of an IB education.

The extended essay at a glance

The extended essay is an in-depth study of a focused topic, undertaken either through a subject-focused approach or an interdisciplinary approach combining two DP subjects. Students choose from the list of available DP subjects for the examination session in question. This is normally one of the student's six selected subjects (or two in the case of the interdisciplinary pathway) for those taking the IB diploma, or a subject that a course student has a background in. The extended essay is intended to promote academic research and writing skills, providing students with an opportunity to engage in personal research in a topic of their own choice, under the guidance of a supervisor (an appropriately qualified member of staff within the school). Students produce a significant piece of appropriately presented and structured writing, in which ideas and findings are communicated in a coherent, reasoned manner, appropriate to the subject(s) chosen. Students must attend three reflection sessions with their supervisor. The third session is a short, concluding interview, or viva voce, that follows the completion of their extended essay. An assessment of this reflection is made under criterion E using the reflection and progress form (RPF).

The extended essay, whether subject-focused or interdisciplinary, is assessed against common criteria.

Key features of the extended essay

- The extended essay is compulsory for all students taking the DP and is an option for course students.
- The extended essay is a piece of independent research and writing on a topic chosen by the student in consultation with a designated supervisor in the school.
- The extended essay is presented as a formal piece of academic writing containing no more than 4,000 words accompanied by a reflective statement of no more than 500 words. The statement is included on the RPF.
- The essay is the result of approximately 40 hours of work by the student.

- Students are supported by a supervision process recommended to be three to five hours long, which includes three mandatory reflection sessions; the third and final reflection session is the viva voce, a concluding interview with the supervisor.
- The extended essay process helps to prepare students for the research-driven environment of university or college.

The extended essay is externally assessed and, in combination with the grade for theory of knowledge (TOK), contributes up to three points to the total score for the IB diploma (see figure 4).

- A student must achieve a D grade or higher for the extended essay to be awarded the diploma.
- When choosing a subject for the extended essay, students must consult the list of available DP subjects published in the *Diploma Programme Assessment procedures* for the examination session in question.

Figure 4
Points awarded for TOK and the extended essay

		Theory of knowledge (TOK)				
Extended essay	Grade awarded	A	B	C	D	E or N
	A	3	3	2	2	Failing condition
	B	3	2	2	1	Failing condition
	C	2	2	1	0	
	D	2	1	0	0	
	E or N	Failing condition				

Prior learning

The extended essay is a unique experience for all students, both those who are taking the full DP and course students who choose it as an option. While no particular background is formally required to undertake the extended essay, it is strongly recommended that students carry out their research in a subject area they are currently studying in the DP, to ensure that they have sufficient subject knowledge to complete the task. If a student has an understanding of a subject that was gained outside their DP studies, they should make sure they are familiar with the subject from a DP perspective.

For those students completing an interdisciplinary extended essay, it is strongly recommended that they undertake a course of study in at least one of the subjects chosen for their essay. Research methods should be carefully chosen to maximize the potential for integrating aspects of both subject areas. Interdisciplinary research and writing will be new to many students and they should take full advantage of extended essay support materials available in this area and guidance from their supervisor.

The extended essay and international-mindedness

The extended essay is an excellent vehicle for widening students' perspectives in general and their appreciation of cultural diversity in particular. The critical thinking element of the research and writing process includes evaluation of a range of perspectives, and these may have different cultural origins. Depending on the nature of their personal interests, students may be encouraged to explore an issue of global significance and, in so doing, examine links between the local and the global.

Students can also be encouraged to use international-mindedness to make connections with the extended essay's complements in the DP core: TOK and creativity, activity, service (CAS). Different cultural perspectives are considered in TOK, and an appreciation is developed of how different cultural traditions have contributed to current constructions of knowledge. Students could also consider devising a project in CAS that reflects an issue of global significance but is explored from a local perspective.

Aims

Aims of the extended essay

The aims of the extended essay are to enable students to:

1. experience the excitement of intellectual exploration
2. engage in student-led academic research on a topic of personal interest
3. develop skills in research, thinking, self-management and communication
4. reflect on the learning experience of doing an extended essay.

Assessment objectives

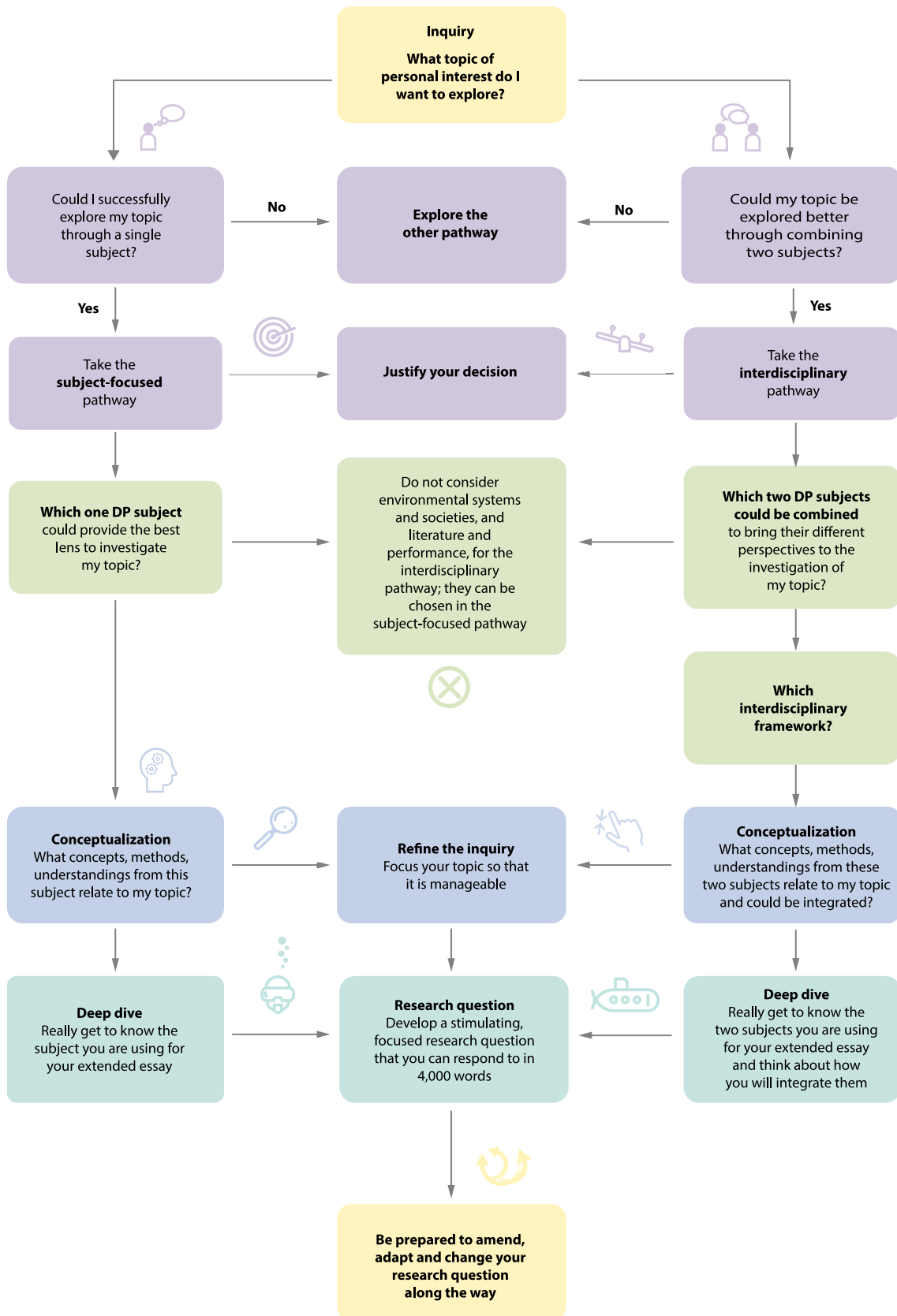
In working on the extended essay, students are expected to achieve the following assessment objectives.

Assessment objectives	
Knowledge and understanding	<p>To demonstrate knowledge and understanding of the topic chosen and the research question posed.</p> <p>To demonstrate knowledge and understanding of terminology and concepts.</p> <p>To demonstrate knowledge and understanding of relevant research methods.</p>
Application and analysis	<p>To apply relevant research methods to respond to the research question.</p> <p>To analyse the research to determine appropriate findings.</p>
Synthesis and evaluation	<p>To discuss in a balanced way the significance of the research findings.</p> <p>To develop a clear line of argument that links the research question, research findings and conclusions.</p> <p>To evaluate the effectiveness of the essay.</p> <p>To evaluate the extended essay learning experience and reflect on personal growth.</p>
Communication of research	<p>To communicate research according to appropriate structural conventions.</p> <p>To understand and demonstrate academic integrity.</p>

Overview of extended essay pathways

For the extended essay, you have a choice of two pathways: the interdisciplinary pathway or the subject-focused pathway. The direction you take will depend on the nature of your topic, arising from exploration of your personal interests and how these may relate to your Diploma Programme (DP) studies. Figure 5 sets out how you might think through these early choices, but it should be noted that this process may unfold differently for different students, and that to change your thinking before you settle on something is entirely acceptable.

Figure 5
Extended essay pathways



The interdisciplinary pathway

Curiosity is the engine of achievement.

Ken Robinson

Your extended essay, whether interdisciplinary or subject-focused, should begin with an idea that is generated by your personal interest. Some ideas will suit exploration through the subject-focused pathway, while others will suit the interdisciplinary pathway if the ideas may be better explored through the combined lenses of two DP subjects. Imaginative interdisciplinary collaboration can open such topics to rich research.

What does “interdisciplinary” mean in the extended essay?

You research and write your extended essay in an interdisciplinary way when **you integrate knowledge, concepts, theories, perspectives or methods, or a combination of these, from two chosen DP subjects**. In other words, elements of the two subjects are combined so that they work together effectively to help research an extended essay topic.

Ultimately, integration of two subjects can lead to fresh insights and create new and/or deeper understandings that would not be possible through research within one DP subject alone.

Notes

1. As you will see in “[The subject-focused pathway](#)” section of this guide, **there are two DP subjects that are categorized as “cross-disciplinary”: environmental systems and societies (ESS) and literature and performance**.

It is not permitted to choose these subjects in the interdisciplinary pathway, only in the subject-focused pathway. This restriction aims to prevent over-complexity in your research and writing.

If you are interested in a topic that combines theatre and literature, choose literature and performance in the subject-focused pathway.

If you are interested in a topic that combines geography and biology, depending on the nature of your topic, consider choosing ESS in the subject-focused pathway.

2. **Languages of submission:** At this stage the languages of submission for interdisciplinary extended essays are restricted to English, French and Spanish. All interdisciplinary essays must be written in one of these languages. The IB aims to add further languages of submission over time, and will inform schools of any changes at the appropriate times. In the meantime, students can address an aspect of language or literature from a language outside these parameters, but the essay itself must be written and submitted in English, French or Spanish.

A note on “integration”

“Integration” is a characteristic that develops and emerges as the research and writing of the extended essay progresses. It is not necessary to think of integration as a starting point. You can begin in a relatively straightforward way by focusing on incorporating some approaches from the two DP subjects you have chosen, and applying those approaches to the research question.

You can then develop a line of argument that is informed by connections made between elements of the two chosen DP subjects. Gradually, these elements can be synthesized, resulting in a conclusion that brings the reader a sense of how you have integrated the knowledge, concepts, theories, perspectives, methods, or a combination of these, from the two DP subjects. This will allow for the success of your integrative approach to be evaluated.

Guidance on interdisciplinary research and writing

If you decide that the interdisciplinary pathway is appropriate for your extended essay topic, further advice on how best to make this approach work is available in the [Extended essay support material](#). Make sure that your supervisor shares the guidance you need or gives you access to it, from both the guide and the support material.

Balance between the two DP subjects

In an interdisciplinary extended essay, it is not necessary for you to achieve an evenly balanced combination of each of the two DP subjects. The relative balance will depend on the nature of the topic and the emphasis of the research question. However, an interdisciplinary extended essay should demonstrate clearly that integration of elements of the two subjects has specifically enabled an effective response to the research question.

Rigour in an interdisciplinary extended essay

To ensure rigour in an interdisciplinary extended essay, your understanding of the two DP subjects that are combined in an interdisciplinary essay needs to be evident. This understanding will contribute to the quality of the research, which is the overall measure of rigour in an extended essay. A more rigorous research process is likely to lead to more reliable findings. **Consequently, it is strongly recommended that you are studying at least one of the two DP subjects you are using for the extended essay.** You will then be bringing to the research process an emerging understanding of knowledge, concepts, theories, perspectives, methods, or a combination of these, from at least one DP subject. This understanding will be important in terms of developing an understanding of elements of the second DP subject and combining these in an effective interdisciplinary research pathway.

To safeguard the rigour of an interdisciplinary extended essay, it is important that you regularly check with your supervisor about the quality of your ongoing research and, if necessary, take action to improve it.

Why choose an interdisciplinary extended essay?

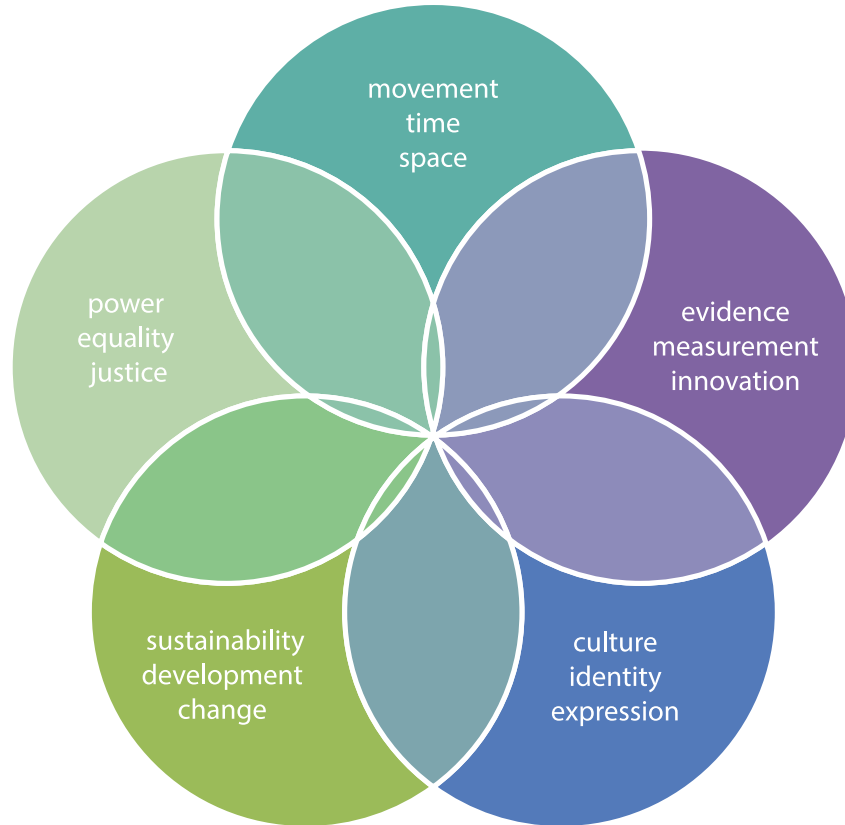
Some answers to this question are explored in the table below.

Students who take the interdisciplinary pathway could be:	Examples of interdisciplinary ideas
responding to a question of personal interest in a more insightful way than would be possible through a single subject.	<ul style="list-style-type: none"> • Exploring the biomechanics and physics of generating spin with a cricket ball: sports, exercise and health science combined with physics • Examining the automobile as literary symbol and motif: design technology combined with language and literature • Investigating government health policy from the perspectives of economic policy and human well-being: economics combined with social and cultural anthropology
integrating concepts or methods to gain a deeper understanding of an issue or problem.	<ul style="list-style-type: none"> • Investigating the concept of gender from both biological and social perspectives: biology combined with social and cultural anthropology • Applying mathematical modelling to finding solutions for social housing: mathematics combined with geography • Analysing the covers of women's magazines from the perspectives of both language and marketing: business management combined with language and literature • Investigating enzyme activity using skills from two sciences: biology combined with chemistry
investigating a complex issue of global concern that is better addressed using two DP subjects.	<ul style="list-style-type: none"> • Investigating the potential for achieving global sustainability of using plastics: chemistry combined with geography, or psychology combined with business management • Exploring climate change modelling: mathematics combined with computer science

Students who take the interdisciplinary pathway could be:	Examples of interdisciplinary ideas
	<ul style="list-style-type: none"> • Examining both economic and social perspectives of development: economics combined with geography
<p>applying an insight, theory or method from one DP subject to the content of another DP subject to seek new perspectives and understandings.</p>	<ul style="list-style-type: none"> • Applying chaos theory to the Cuban Missile Crisis: physics combined with history • Exploring poetry with an understanding of cognitive neuroscience: language and literature combined with psychology • Investigating how literary works might influence political movements: history combined with language and literature • Investigating the need for game design to adapt to the dynamic nature of communities and societies: digital society combined with design technology
<p>exploring interesting questions at the boundaries of DP subjects.</p>	<ul style="list-style-type: none"> • Exploring the ethics of nanotechnology: physics combined with philosophy • Examining the purposes of specific dress designs in graphic novels: design technology combined with language and literature • Exploring the psycholinguistic and cultural processes involved in learning languages: language acquisition combined with psychology • Analysing addiction to social media from social and biological perspectives: digital society combined with biology or psychology • Applying the idea of asymmetric information to investigate internet scams: economics combined with digital society • Exploring cognitive processes in the creation of abstract art: visual arts combined with psychology

Interdisciplinary frameworks

Figure 6
Frameworks for the interdisciplinary extended essay



The five frameworks shown in figure 6 are intended to help you position and shape your ideas for an interdisciplinary extended essay topic. These frameworks allow for inclusion of a broad, diverse range of ideas that could arise from your personal interests. They are designed to help you choose an appropriate context for the topic you wish to explore with an interdisciplinary approach.

- The frameworks are depicted as overlapping in figure 6 because, while your topic should broadly fit within one framework, it could include aspects that relate to another one or more.
- It should be noted that a topic does not need to connect with all the words that describe a framework. For example, in the framework “culture, identity, expression”, the focus might be on “identity” but not “culture” or “expression”.
- The same topic could even be placed in an alternative framework, depending on the emphasis of the research question.

While the official registration with the IB of your interdisciplinary extended essay must place it in one of the frameworks, the connection with the framework is not directly assessed. The main purpose of the frameworks is to provide you with initial guidance for the inquiry process, but they will also assist the IB with coordinating the assessment of interdisciplinary essays.

Broad topic areas within the five interdisciplinary frameworks

The number of possible broad topic areas that could kick-start an interdisciplinary extended essay is limited only by your capacity to imagine ideas that you would like to research. Here are some initial suggestions for each of the five frameworks that may help you get started.

Power, equality, justice

Social or political issues—health, education, racism, gender, poverty, fairness, conflict; the body—commodified bodies, violent bodies, bodies as weapons of war.

Culture, identity, expression

Belief systems; politics of identity; political movements; disputed territories; sporting and other competitions; art and science; music; protests; icons; cultural heritage; the body—modifications; literature and science; psycholinguistics; gaming.

Movement, time, space

Migration; refugees; virtual communities; astronomy; travel; urbanism; social media; contested spaces; non-places or non-spaces; conflict; globalization; museums; questions of evolution.

Evidence, measurement, innovation

Art and science; literature and science; cross-scientific inquiry; mathematics in science; gaming; social media.

Sustainability, development, change

Sustainability—environmental, social, economic; development—economic, social; food; health; political issues; poverty.

Choosing a topic

Choosing a topic is arguably the most important stage of your extended essay journey because it sets you up for a confident start and drives everything else that follows. To begin with, it is important for you to “take your idea for a walk”, that is, to think through how it might develop as an interdisciplinary essay. If you have already identified an interest in a broad topic area, then responding to the following four questions will help you get started.

1. What aspect or issue within this broad topic area really interests me?
2. Why is an interdisciplinary approach appropriate for my topic?
3. Which framework best suits my topic?
4. Which two DP subjects can I use to investigate my topic successfully within that framework?

To illustrate this process, some examples from students are outlined in the tables below.

For additional advice, refer to “Getting started” in the “Researching the extended essay” section of this guide.

Broad topic area: Gender

Question	Comments
<p>What aspect or issue within this broad topic area really interests me?</p>	<p>I am really interested in gender. Specifically, I have been reading a lot about the case of Caster Semanya and I wonder if it is fair that athletes may have to prove their gender or perhaps take drugs that reduce hormone levels. Who should athletes like Caster be allowed to compete with?</p>
<p>Why is an interdisciplinary approach appropriate for my topic?</p>	<p>My essay could integrate scientific and social approaches to help provide a deeper understanding of the concept of gender than would be possible through just one of these approaches. An interdisciplinary approach may help me to better understand this problem, perhaps from the</p>

Question	Comments
	perspective of the International Olympic Committee.
Which framework best suits my topic?	Depending on the nature of the research question I develop, the most suitable frameworks could be power, equality, justice or culture, identity, expression .
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	I think I can integrate biology and social and cultural anthropology : I could explore tensions between the genetic definition of gender and the idea of gender as being socially constructed. Also language and literature and global politics : I could explore the language of the media around women in sport and how this influences political decisions about gender rights globally.

Broad topic area: Cross-scientific inquiry

Question	Comments
What aspect or issue within this broad topic area really interests me?	I am interested in ideas that are relevant to more than one field of science. Specifically, I want to understand more about enzyme activity.
Why is an interdisciplinary approach appropriate for my topic?	To understand enzyme activity fully, I need to explore it from more than one perspective, i.e. the structure of proteins and also reaction kinetics. That points me towards biochemistry, an area I am really interested in.
Which framework best suits my topic?	Evidence, measurement, innovation.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	I will be able to integrate knowledge and understanding from both biology and chemistry .

Broad topic area: Mathematics in science

Question	Comments
What aspect or issue within this broad topic area really interests me?	I would like to know more about the patterns of movement of "rides" at fun fairs. What might the optimum speeds and angles be? Can this movement be modelled?
Why is an interdisciplinary approach appropriate for my topic?	I can explore the physical system experimentally, but using mathematical models will also help me to describe and explain it better. I could bring in video analysis of a section(s) of a rollercoaster, and factors such as frictional forces, angular acceleration and circular motion; but that could quite quickly become rather complex. However, using modelling would

Question	Comments
	mean that any differential equations could be solved using modelling software.
Which framework best suits my topic?	Evidence, measurement, innovation.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	I think physics and mathematics suit this investigation. The experimental methods of physics can be enhanced by using mathematical concepts and language to describe the system.

Broad topic area: Art and science

Question	Comments
What aspect or issue within this broad topic area really interests me?	I am interested to explore how cognitive processes work as artists create abstract art. I am curious about Wassily Kandinsky's work because he is said to have used his synaesthesia (the capacity to "see" sound and "hear" colour) to create abstract paintings.
Why is an interdisciplinary approach appropriate for my topic?	Applying insights from psychology to the content of visual arts will add to my understanding of the artistic process.
Which framework best suits my topic?	Culture, identity, expression.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	I think visual arts and psychology . The ideas and practice of the artist will be unpacked by engaging with the study of the human mind and its functions, applying understanding of cognitive processes.

Broad topic area: Literature and science

Question	Comments
What aspect or issue within this broad topic area really interests me?	Poems move me. I would like to know why and how this happens, to learn about how poetry impacts cognitive processes in the brain.
Why is an interdisciplinary approach appropriate for my topic?	I have read that new brain imaging technology is connecting art and science by mapping the different ways in which the brain responds to poetry. I would like to explore this interdisciplinary idea further.
Which framework best suits my topic?	Depending on the emphasis of my research question, either culture, identity, expression or evidence, measurement, innovation will be suitable frameworks.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	Poetry, as experienced through language and literature , integrated with cognitive neurobiology, i.e. biology .

Broad topic area: Psycholinguistics

Question	Comments
What aspect or issue within this broad topic area really interests me?	I can speak several languages and am interested in the processes involved in how languages are learned. Do psycholinguistic and cultural processes mix?
Why is an interdisciplinary approach appropriate for my topic?	This is an interesting question on the boundary of language acquisition, so to help me undertake research I will need to combine elements from language B and psychology.
Which framework best suits my topic?	Culture, identity, expression.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	A language B subject and psychology .

Broad topic area: Culture and migration

Question	Comments
What aspect or issue within this broad topic area really interests me?	I am interested in culture and the sense of belonging. Inspired by my experiences as a “third-culture kid”, I would like to understand how moving from country to country impacts people’s understanding of the world and their response to it. Is it the same for migrants? I might focus on a cultural group that I find interesting.
Why is an interdisciplinary approach appropriate for my topic?	I could research this topic through one subject, but the perspective from a second subject should enhance my understanding. Blending spatial analysis with cultural analysis could give me the answers I am looking for.
Which framework best suits my topic?	Depending on the emphasis of my research question, either movement, time, space, or culture, identity, expression.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	I think that geography can help me understand how places are continually reshaped as people move between them, forming interconnections and spatial linkages. Meanwhile social and cultural anthropology will help me understand how migrants are perceived by host societies and how they respond to these perceptions.

Broad topic area: Literature and political movements

Question	Comments
What aspect or issue within this broad topic area really interests me?	I would like to understand how literary works influence political movements. My background is

Question	Comments
	Irish, and this research could help me understand if we might one day see a united Ireland. I am inspired by reading about Bobby Sands and how his poetry affected his political vision, and vice versa.
Why is an interdisciplinary approach appropriate for my topic?	Applying insights from the poetry of writers like Bobby Sands to the history of political movements in Ireland should provide me with new perspectives and understandings. An interdisciplinary approach will help me to find out if literature has a political purpose: how does literature affect the real world? I might focus on the importance of the literature of the Irish cultural revival to the 1916 Easter Rebellion.
Which framework best suits my topic?	Culture, identity, expression.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	Combining elements from history and language and literature will strengthen my inquiry and lead to a better understanding.

Broad topic area: Gaming

Question	Comments
What aspect or issue within this broad topic area really interests me?	Society is changing so rapidly and I wonder if the way we design simulation games also needs to change to take this into account. How do we represent "reality" in the virtual world of gaming?
Why is an interdisciplinary approach appropriate for my topic?	Applying a method from one DP subject to the content of another DP subject will help me to seek new perspectives and understandings. In this case, I can combine a design thinking approach with a social analysis of gaming communities.
Which framework best suits my topic?	Depending on the emphasis of my research question, culture, identity, expression or evidence, measurement, innovation could frame my topic.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	Digital society and design technology.

Broad topic area: Conflict

Question	Comments
What aspect or issue within this broad topic area really interests me?	I would like to find out why terrorist groups have become a feature of our world. Is there a link with the foreign policies of various governments?
Why is an interdisciplinary approach appropriate for my topic?	A historical approach will give me insights into the circumstances surrounding the establishment of

Question	Comments
	these groups. I can then combine this knowledge with a contemporary understanding of people, power and politics.
Which framework best suits my topic?	Power, equality, justice.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	I think history will help me understand the “hard power/soft power” nature of governments’ foreign policies and global politics will help me investigate the way that power and politics play out as a result.

Broad topic area: Climate change and economics

Question	Comments
What aspect or issue within this broad topic area really interests me?	I read that the Intergovernmental Panel on Climate Change has declared Southern Africa a “climate change hot spot”. I would like to find out if more focus on renewable energy sources is likely for new development projects. How might decisions made at local and global levels impact this situation?
Why is an interdisciplinary approach appropriate for my topic?	I will find out more if I look at this topic from the different viewpoints of political issues and economic policies and practices, at global and local levels.
Which framework best suits my topic?	Sustainability, development, change.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	Economics and global politics.

Broad topic area: Social media

Question	Comments
What aspect or issue within this broad topic area really interests me?	What makes us addicted to social media? I am interested to find out. Is it just a social phenomenon or is biology involved? Is my brain producing dopamine when I am interacting with social media?
Why is an interdisciplinary approach appropriate for my topic?	To find out the answers to my questions, I need to integrate concepts and methods from the humanities and the sciences.
Which framework best suits my topic?	Depending on the emphasis of my research question, either movement, time, space or evidence, measurement, innovation can frame my essay.
Which two DP subjects can I integrate to investigate my topic successfully within that framework?	I think biology (neuropharmacology) can help me look into the chemistry of the brain, and either digital society or the sociocultural approach in

Question	Comments
	psychology can help me explore the social aspects of the topic.

Developing a research question

Once your extended essay topic is ready to take the interdisciplinary pathway—that is, an appropriate framework has been selected, and two DP subjects have been chosen—you then need to develop a research question. Your research question should:

- be clearly stated and focused
- be open to amendment or change if your research takes you in a different direction
- invite a critical examination of the topic in respect of integrating knowledge, concepts, theories, perspectives or methods, or a combination of these, from two DP subjects
- encourage analysis, evaluation and synthesis, rather than description, unsupported generalizations and value judgements.

It is also important for you to imagine being able to respond to your research question comfortably within the 4,000-word limit of an extended essay. For more detailed guidance, refer to the “[Researching and writing the extended essay](#)” section of this guide.

Example topics, research questions and approaches

Topic and research question	Interdisciplinary framework	Outline of approach
<p>Topic: The impact of rising economic power on the balance of forces in a particular region</p> <p>Research question: How has the rise of India as an economic power affected the balance of forces in the region with reference to China and the USA?</p>	<p>Power, equality, justice</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • Macroeconomics • Power • The growth of the BRICS nations (Brazil, Russia, India, China and South Africa) <p>Integrating two DP subjects: economics and global politics.</p>
<p>Topic: The consequences of gentrification</p> <p>Research question: In what ways has the gentrification of the historic centre of Lisbon turned the city into a contested space?</p>	<p>Movement, time, space</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • Aesthetics • Mass tourism • Commodification • Market forces <p>Integrating two DP subjects: geography and economics, or geography and visual arts.</p>
<p>Topic: The relationship between machine learning and political populism</p> <p>Research question: With reference to the USA, how have the machine learning algorithms of social media impacted the recent growth of political populism and to what effect?</p>	<p>Evidence, measurement, innovation</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • Neural networks • Echo chambers • Political polarization • Trolls

Topic and research question	Interdisciplinary framework	Outline of approach
		Integrating two DP subjects: mathematics and computer science , or mathematics and global politics .
<p>Topic: Food security and sustainability</p> <p>Research question: How effective are the measures Singapore has taken since 2018 to ensure food security and sustainability for its people?</p>	<p>Sustainability, development, change</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • Urban farming • Import risks • Climate resilience • Resource efficiency <p>Integrating two DP subjects: geography and economics.</p>
<p>Topic: Migrants negotiating their identities</p> <p>Research question: What are the pressures on migrants obliged to negotiate their identities between their country of origin and their adopted country?</p>	<p>Culture, identity, expression</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • A case study of a migrated community • Language and traditions • Generational conflict <p>Integrating two DP subjects: social and cultural anthropology and language and literature, or social and cultural anthropology and psychology.</p>
<p>Topic: Representation of Indigenous peoples</p> <p>Research question: How does Warwick Thornton’s film <i>Samson and Delilah</i> (2009) provoke questions about the Aboriginal voice in Australia?</p>	<p>Power, equality, justice</p> <p>This research question could also function within “culture, identity, expression”, depending on the specific focus of the research.</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • Racial tensions • The road movie • Different cultural frameworks of perception and understanding <p>Integrating DP subjects: film and psychology, or film and social and cultural anthropology.</p>
<p>Topic: The environmental impact of Bt crops (<i>Bacillus thuringiensis</i>) in developing countries</p> <p>Research question: What are the negative environmental impacts of Bt crops in developing countries compared with their positive effects?</p>	<p>Sustainability, development, change</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • A country case study • Pesticides • Genetic engineering and transferral • Hidden costs <p>Integrating two DP subjects: biology and geography, or biology and economics.</p>
<p>Topic: Subversion of the principles of the Irish cultural revival</p> <p>Research question: How do the characters and the dramatic action in Sean O’Casey’s “Dublin Trilogy”* subvert</p>	<p>Culture, identity, expression</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • Urban versus rural • Iconoclasm • Mythological naturalism

Topic and research question	Interdisciplinary framework	Outline of approach
<p>the principles of the Irish cultural revival (1890–1916)?</p> <p><i>*The Shadow of a Gunman/Juno and the Paycock/The Plough and the Stars</i></p>		<p>Integrating two DP subjects: language A and history.</p>
<p>Topic: Disputes over property and land between Israelis and Palestinians</p> <p>Research question: How do the disputes over property and land in the East Jerusalem area of Sheikh Jarrah reflect the broader conflicts between Israelis and Palestinians on the West Bank of the Jordan River?</p>	<p>Power, equality, justice</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • The status of Jerusalem • The history of Sheikh Jarrah from Israeli and Palestinian perspectives • The settler movement • The Oslo Accords <p>Integrating two DP subjects: history and global politics.</p>
<p>Topic: The impact of social influencers on marketing</p> <p>Research question: How has the growing popularity of influencers on Instagram marked an innovative shift in how service industries* market their products?</p> <p><i>*Examples might be entertainment, fashion, food.</i></p>	<p>Evidence, measurement, innovation</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • Digital versus traditional marketing • The “celebrity effect” • Marketing demographics <p>Integrating two DP subjects: digital society and business management.</p>
<p>Topic: The relationship between dance therapy and the cognitive function of dementia patients</p> <p>Research question: How can dance movement therapy alleviate the symptoms of dementia and improve the cognitive function of dementia patients?</p>	<p>Evidence, measurement, innovation</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • Different forms of memory • Somatic sensory functions • Non-verbal language • Neuro pathway breakdown in dementia <p>Integrating two DP subjects: dance and psychology.</p>
<p>Topic: The use of space, movement, time and technology in philosophical writing</p> <p>Research question: How does Robert Pirsig use space, movement, time and technology as structural elements in his book <i>Zen and the Art of Motorcycle Maintenance</i> to explore the purpose of life?</p>	<p>Movement, time, space</p>	<p>The research question could be addressed through the following lenses.</p> <ul style="list-style-type: none"> • Ethics • Holistic experience • Quest narratives <p>Integrating two DP subjects: philosophy and design technology.</p>

Note: The examples above are general enough for you to adapt to your own learning environment. For example, the question on India could be addressed to Brazil or China; the question related to Singapore and sustainable food could be applied to another small country with similar restricted land issues; and the question on Bt crops as a principle can focus on specific country contexts.

Using the assessment criteria to inform the writing of the essay

Regularly refer to the “[Assessment of the extended essay](#)” section in this guide as you write your essay—it will be invaluable. Given that your interdisciplinary extended essay brings together the perspectives of two DP subjects, also read the assessment criteria sections of the subject-specific guidance for the two subjects you are using, or the subject group that includes it. You will find this in the “[Subject-specific guidance](#)” section of this guide. It is also essential to read the “[Generic guidance for the extended essay](#)” section in this guide.

The following table provides some additional guidance about using the assessment criteria that relates specifically to the interdisciplinary approach you have taken.

A: Framework for the essay	Your research question needs to reflect your interdisciplinary approach. You should explain and justify your use of this approach. The reader should be able to see that you have drawn on the research methods that relate to the two subjects you are integrating. Be aware of any structural conventions that are used in the writing of essays in each of the two subjects you are using, and apply these where relevant.
B: Knowledge and understanding	You need to show your disciplinary grounding in the two DP subjects that you are combining, through effective use of relevant terminology and concepts. The balance of knowledge and understanding between the two subjects does not necessarily need to be even—this depends on the nature of your research question.
C: Analysis and line of argument	The findings that come from your analysis should reflect the combination of the two subject lenses you are using. Your line of argument should give the reader a sense of the development and flow of the integration of the perspectives of the two subjects.
D: Discussion and evaluation	Discussion is the key tool for integrating the concepts, understandings and, as relevant, theories of the two subjects, in relation to your research question. Evaluation of the effectiveness of your essay can be enhanced by an appraisal of the interdisciplinary approach you have taken.
E: Reflection	Refer to the “ Generic guidance for the extended essay ” section and the “ Reflection and the extended essay ” section in this guide. It is worth noting that one of the transferable skills you have learned is applying an interdisciplinary approach to research.

The subject-focused pathway

Research is formalized curiosity. It is poking and prying with a purpose.

Zora Neale Hurston

Your extended essay, whether subject-focused or interdisciplinary, should begin with an idea that is generated by your personal interest. If your idea can be specifically associated with one DP subject, then the subject-focused pathway is the best choice. Investigation through the lens of a specific subject allows you to develop understanding of a topic within the academic boundaries of that subject.

Note: If you would like to use **ESS** or **literature and performance** for your extended essay—both of which are classified in this guide as cross-disciplinary subjects—then you must take the subject-focused pathway,

not the interdisciplinary pathway. This restriction aims to prevent over-complexity in your research and writing.

What does “subject-focused” mean in the extended essay?

You are researching and writing your extended essay in a subject-focused way when you use knowledge, concepts, theories, perspectives or methods, or a combination of these, from one chosen DP subject to respond to a research question. You are then building on an understanding of this subject that you have developed during your DP studies. It is important to think about your extended essay as being a different experience compared with your classroom learning. This is your opportunity to engage in self-designed, independent research, challenging yourself, expanding your thinking and stretching boundaries.

Guidance on subject-focused research and writing

If you decide that the subject-focused pathway is appropriate for your extended essay topic, explore the “[Subject-specific guidance](#)” section of this guide, but consider this in conjunction with the “[Generic guidance for the extended essay](#)” section. Further advice on how best to make this approach work is available in the *Extended essay support material*. Make sure your supervisor shares or gives you access to the guidance and advice you need.

Rigour in a subject-focused extended essay

To ensure rigour in a subject-focused extended essay, your work needs to be well researched, accurate, detailed and well written in the context of the chosen subject. You need to show a deep understanding of the subject and apply this understanding to your specific research question. **Consequently, it is strongly recommended that if you do a subject-focused extended essay, you are already studying that chosen subject in the DP.** Then you will be well placed to:

- choose an appropriate topic you find interesting and develop a research question that can be effectively investigated and analysed through that subject
- use and build on your existing understanding of the knowledge, concepts, theories, perspectives or methods, or a combination of these, of that subject.

To safeguard the rigour of a subject-focused extended essay, it is important that you regularly check with your supervisor about the quality of your ongoing research and, if necessary, take action to improve it.

Choosing a topic

Choosing a topic is arguably the most important stage of your extended essay journey because it sets you up for a confident start and drives everything else that follows. To begin with, it is important for you to “take your idea for a walk”, that is, to think through how it might develop as a subject-focused essay. If you have already identified an interest in a broad topic area, then responding to the following three questions will help you get started.

1. What aspect or issue within this broad topic area really interests me?
2. Why is a subject-focused approach appropriate for my topic?
3. How can I challenge myself and expand my thinking in this subject area?

The table below gives an example to illustrate this process.

Broad topic area: Corporate culture	Comments
What aspect or issue within this broad topic area really interests me?	How does the way a business is organized impact its success in the marketplace?
Why is a subject-focused approach appropriate for my topic?	I study DP business management and I can use the knowledge and skills I have learned to investigate this topic, which can be fully addressed through the lens of this subject.

Broad topic area: Corporate culture	Comments
How can I challenge myself and expand my thinking in this subject area?	Organizational (corporate) culture is a higher level (HL) topic that I would like to learn more about than we have covered in class. I will look into focusing my inquiry on innovations in creative tech businesses.

Developing a research question

Once your extended essay topic is sitting comfortably in the context of the subject-focused pathway, and a suitable DP subject has been chosen, you need to develop a research question. Your research question should:

- be clearly stated and focused
- be open to amendment or change if your research takes you in a different direction
- invite a critical examination of the topic in respect of the knowledge, concepts, theories, perspectives or methods of your chosen DP subject
- encourage analysis, evaluation and synthesis, rather than description, unsupported generalizations and value judgements.

For more detailed guidance, refer to the “[Researching and writing the extended essay](#)” section of this guide.

It is also important for you to imagine being able to respond to your research question comfortably within the 4,000-word limit of an extended essay. For examples of research questions and approaches, refer to the “[Subject-specific guidance](#)” section in this guide and explore the subjects you are thinking of using.

Using the assessment criteria to inform the writing of the essay

Regularly refer to the “[Assessment of the extended essay](#)” section in this guide as you write your essay—it will be invaluable. Also read the assessment criteria sections of the subject-specific guidance for the subject you are using, or the subject group that includes it. You will find this in the “[Subject-specific guidance](#)” section of this guide. It is also essential to read the “[Generic guidance for the extended essay](#)” section in this guide.

Generic guidance for the extended essay

Note: Before you begin, it is important to know and understand that it is your responsibility, together with your supervisor, to ensure that your extended essay does not duplicate any other work submitted for the IB diploma, for example, an internal assessment (IA) task.

Overview

The extended essay presents a unique opportunity for you to investigate a topic of personal interest that is either clearly grounded in one DP subject or is appropriate for an interdisciplinary approach. Your essay should:

- respond to a clear, focused research question with appropriate research methods and in-depth analysis
- apply reasoned, evidence-based argument, and critical and original thinking, i.e. go beyond simply informing the reader about the topic
- be coherent and well structured
- be framed by the context of the subject(s) you are using
- be informed by the distinctive approaches, concepts, methods, theories, or a combination of these, of the DP subject(s) it concerns.

Choosing a topic

An extended essay involves you applying your skills to explore a topic of personal interest in an imaginative, critical, focused way. It is important that you choose a topic that lends itself to critical investigation and analysis, rather than one that steers you towards a descriptive or narrative piece of writing. A thoughtfully chosen topic that inspires your curiosity and spirit of inquiry paves the way for a strong, interesting essay.

Your topic should provide a context that allows you to design a clear, focused research question. Staying too broad and general almost inevitably leads to descriptive, superficial writing that includes very little critical thinking. In contrast, topics that lead you to develop a refined, achievable research question are likely to encourage the focused application of your skills of discussion, analysis, argument and evaluation.

It is important to be flexible regarding your choice of topic. If your early investigation suggests a shortfall in the availability and suitability of resources needed to support research, be prepared to amend or change your topic.

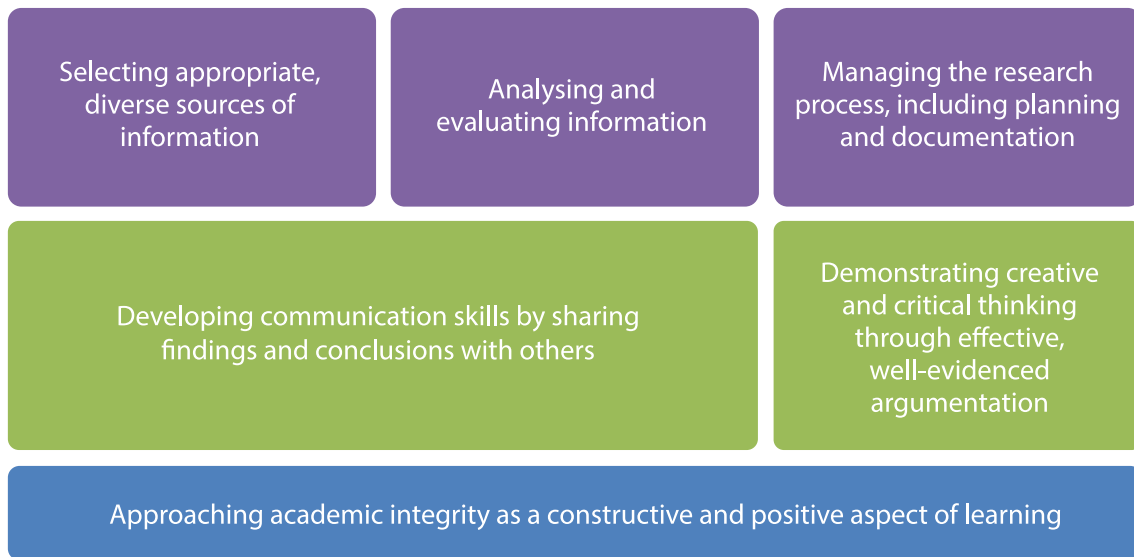
For guidance on getting started, refer to the “[Researching and writing the extended essay](#)” section of this guide.

Researching and writing the essay

Once you are happy with your choice of topic, it can be refined, narrowed and used to generate a workable, focused research question that will drive your research and writing and lead to the enhancement of the research and related skills shown in figure 7.

Figure 7

Skills related to researching and writing the extended essay

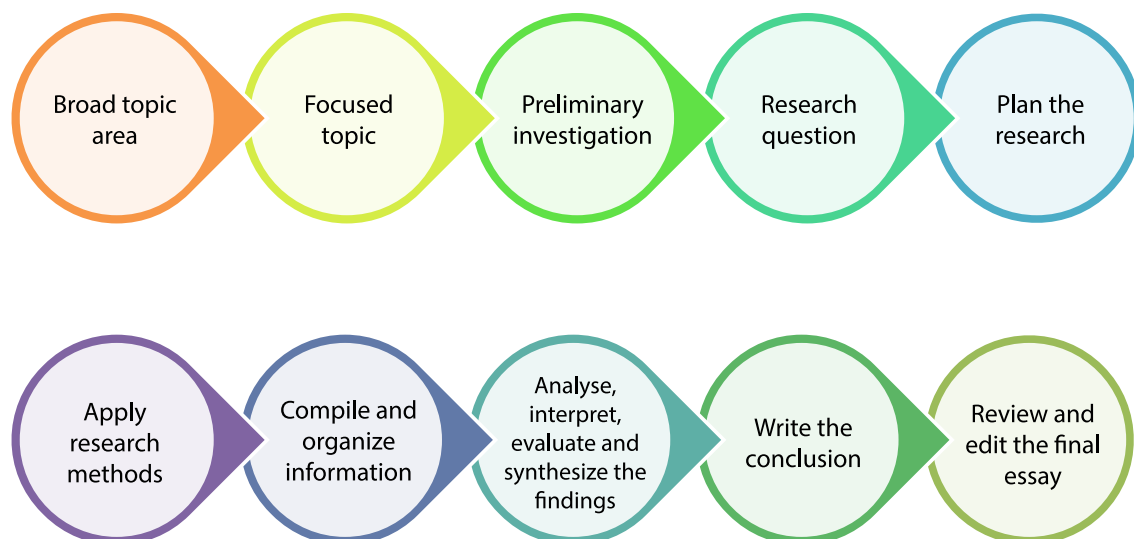


The research and writing process

Figure 8 outlines the research and writing process that underpins your extended essay. However, this process may unfold in slightly different ways or with a different order of events.

Figure 8

The research and writing process

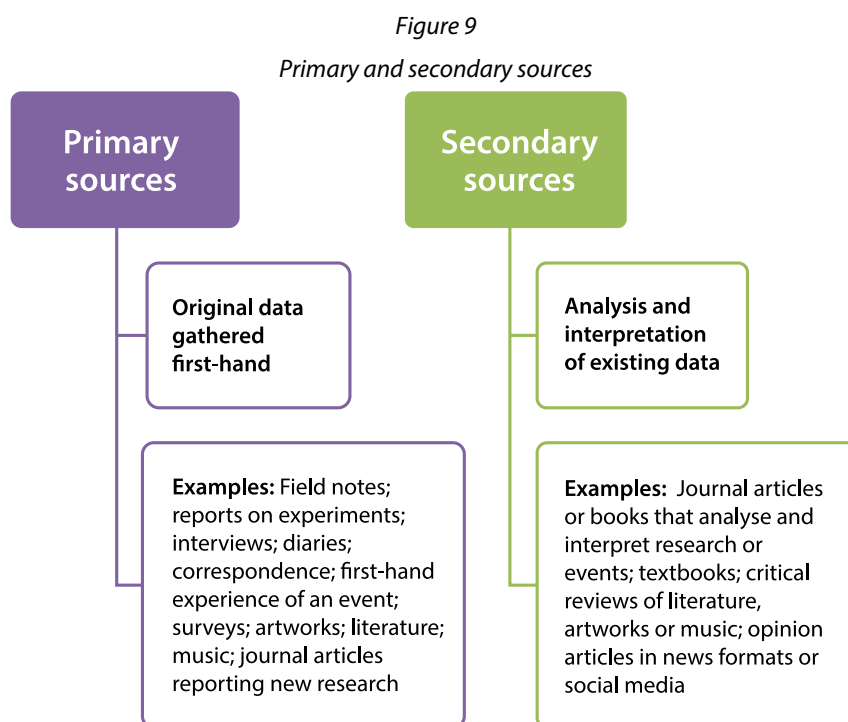


Primary and secondary sources

In terms of gathering data, primary research sources are original data that has been gathered through research that is undertaken first-hand, through methods such as interviews, surveys, focus groups, experimentation, observation or participant observation. Secondary research is carried out by analysing or interpreting existing data that has been collected by others (see figure 9).

Secondary research—a review of the literature available on your chosen topic—is a requirement for each extended essay, regardless of pathway and subject(s) selected. In general, most DP extended essay subjects require the use of both primary and secondary research sources. However, this is not always the case, and you should check the subject-specific guidance to find out the rules on collecting primary research in certain subjects.

If you have gathered primary data for a different original purpose than for your extended essay, it may be used to support your extended essay research, provided that the discrete approach for your topic is clearly explained.



Using the assessment criteria to inform the writing of the essay

Remember that examiners are referring to the extended essay assessment criteria as they read your work and ultimately use these to inform their decision about what grade you receive (see the “[Assessment of the extended essay](#)” section in this guide). Therefore, you too will want to refer closely to the criteria as you write your essay.

The following guidance about using the assessment criteria to inform the writing of your essay is complemented by further advice in the “[Subject-specific guidance](#)” section of this guide.

Criterion A: Framework for the essay

Strands: Research question; research methods; structure

Research question

Make sure the research question arises from the context of a specific topic that is related to your chosen DP subject(s) and that it really is a question. The question should be specific and focused. Make clear to the reader the significance and purpose of the research question and ensure that it connects with the knowledge and understanding evident in your essay.

The research question should:

- encourage critical analysis rather than a descriptive or narrative response
- allow for the development of a strong line of argument

- avoid combining more than one question (i.e. “double-barrelled”), in which case the scope of the essay would probably be too broad
- avoid questions that are liable to lead to writing a descriptive essay; you should aim to be analytical and evaluative
- use higher-order questions that engage deeper thinking processes—wording such as “how significant ...?”, “how successful ...?”, “to what extent ...?” or “what if ...?” is more likely to engage you with analysis and inspire critical evaluation of your research findings
- not lead the reader to a self-evident answer; rather, the question should create an opportunity for you to research the topic thoroughly and construct a line of argument that is not immediately obvious from the question itself.

Research methods

Explain the suitability of the research methods you have chosen to conduct your research and understand how these connect with the methodology of the subject(s) used. Remember that “methodology” is the overall research strategy and rationale, the lens through which the analysis occurs. Meanwhile, “research methods” are the specific tools and procedures used to collect and analyse data. For the extended essay, the understanding of “research methods” is necessarily broad, to cover the contexts of all subjects, including instances where students are limited to using “literature review” as their tool.

If the approach to the essay involves experimentation or fieldwork, provide a description of the methods used that would allow the work to be repeated.

Make sure the reader can see evidence of how you have applied your chosen research methods.

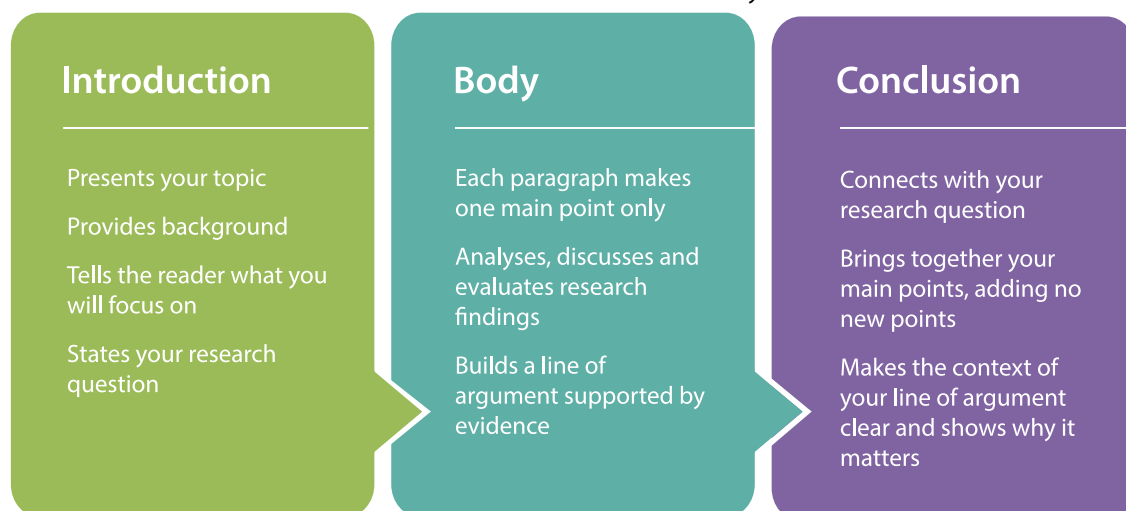
Ensure that there are sufficient sources of suitable quality to allow effective research using your chosen methods. If there are not enough, you may need to amend or change your research question or even reconsider your topic.

Structure

A successful academic essay generally follows the basic structure seen in figure 10.

Figure 10

Basic structure of an academic essay



More specifically, as you write your extended essay you will need to be aware of any structural conventions that relate to academic writing in your chosen subject(s), for example, biology, geography, literature. Structural conventions are rules that should be followed. For instance, in geography and science essays, figures and tables are often used (though they are only included if they help to illustrate a point you are

making). Figures and tables should always be clearly labelled and referred to in your essay text, for example, “the population has grown considerably over the last two decades (see figure 1)”.

For specific advice on any structural conventions that relate to your extended essay subject(s), refer to the “Subject-specific guidance” section in this guide.

Criterion B: Knowledge and understanding

Strands: Knowledge; understanding—terminology; understanding—concepts

Knowledge

The reader should be able to see that you have thoughtfully applied the research findings to explore the topic systematically and build your knowledge of its subject matter. Research findings can include information from reviewing the literature, secondary sources, and data collected and processed. It should be relevant to the research question and support the development of arguments.

Avoid over-extensive quoting from your sources; your knowledge needs to be evident in your own writing. Remember, knowledge is important; it underpins the analysis, discussion and evaluation that demonstrates your critical thinking.

Understanding—Terminology

Subjects are to some extent identified by the specific terminology or “jargon” that academics use when writing or talking about them. If you incorporate subject-related terminology accurately and consistently in the writing of your extended essay, it helps to show that you understand the topic and the subject(s) it relates to. For example, incorporating the terminology “cells”, “cytoplasm” and “lipid” in a biology extended essay: “Typical cells have DNA as genetic material and a cytoplasm composed mainly of water, which is enclosed by a plasma membrane composed of lipid”.

Understanding—Concepts

In terms of the subjects that you study in the DP, concepts are the key ideas around which knowledge is developed. Correctly using concept words or phrases in your writing shows your understanding of the context of the research and supports well-founded analysis. For example, using the concept “marginalization” in a social and cultural anthropology extended essay: “Decades of marginalization has relegated this community to the edge of society, economically, politically, culturally and socially, limiting their access to productive resources and avenues for the realization of their productive human potential.”

Criterion C: Analysis and line of argument

Strands: Analysis; line of argument

Analysis

Analysis means breaking down your topic to bring out its essential elements or structure; you can use your research question as a prompt. The aim is to understand the topic better and to demonstrate this in your writing by establishing relevant findings derived from your research. When you make a particular point of analysis, be sure to support it with relevant evidence from your research.

If your essay is largely descriptive or narrative, it is unlikely to provide sufficient evidence of your skills of analysis.

Line of argument

A line of argument is a reasoned thread that runs through your essay, linking its various elements, bringing overall coherence and supporting the position you are taking. In other words, it is a set of logical connections with signposts that help the reader to see where your argument has come from and where it leads. A clear line of argument will complement your analysis and contribute to a convincing and effective piece of writing.

Why is this necessary? It helps the reader follow the logic of your argument, so they can see a clear pathway through the details of data, quotations and information that you present to support your position. Just as

importantly, it also helps you, the author, to navigate your way clearly as you work through the subsections of the essay. A solid line of argument:

- helps your reader understand your position
- shows that you have a strong understanding of the material
- helps justify the choices you have made along the way
- helps to link your ideas coherently
- shows that you see “the big picture”
- moves your argument forward.

Ideally, you want the reader to be able to agree with your conclusions. For this to happen, they will need to be able to see how you have linked together the various parts of the essay in a logical and effective way. You do not want the reader to be asking, “This is interesting but how do the different parts fit together?”. The “fitting together” is your job as the author, not the job of the reader. The way the elements of the essay fit together should be obvious and explicit. There should be:

- a thread that links the elements of the essay
- an intentional and sustained set of logical connections.

What are the key elements of a “line of argument”? An extended essay typically has certain subsections that may be signposted by chapter headings or may emerge organically from the way the essay is written, as follows.

- Research question
- Research findings
- Conclusions

These sections are the key elements of the line of argument. Their beginnings and ends need to be signposted so the reader knows where they start and finish. To create an effective line of argument, you do not need to add an “extra layer”, or an extra paragraph, to the essay. Instead, you connect the parts that you would typically use, in an effective and explicit way.

For further advice on how to start, build and sustain your line of argument, refer to the appropriate section of the [Extended essay support material](#).

Criterion D: Discussion and evaluation

Strands: Discussion; evaluation

Discussion

To demonstrate your discussion skills, you need to offer a considered and balanced review of the significance of your research findings that includes a range of factors or perspectives. Opinions or conclusions should be presented clearly and supported by appropriate evidence. Compelling arguments are developed through thoughtful analysis of the evidence obtained from research.

Evaluation

As a discerning author of an extended essay, it is important to evaluate the effectiveness of your essay by appraising your research materials, weighing up their strengths and limitations. This includes being aware of the stated or implied positions and views of the writers. Evaluation goes hand in hand with discussion and feeds into your line of argument as you work your way towards showing the reader that you have reached a well-founded conclusion. The intention is not to have a separate “evaluation” section, but rather to integrate it throughout your essay.

Criterion E: Reflection

Strands: Evaluative; growth

Evaluative

As you reflect on your extended essay experience, to be evaluative you need to consider the value of its impact on you as a learner. Give explicit examples of how you have transferred the skills you have learned to apply them in other contexts.

Growth

To reflect on your growth as a consequence of doing the extended essay, consider these questions: How did changes in perspective impact your decision-making? How might your experiences and insights shape your future thinking, including how you envisage transferring the skills and lessons you have learned to other circumstances, such as future studies, career or life in general?

Subject-specific guidance

After reading the generic guidance for the extended essay, if you have chosen the subject-focused pathway, you will benefit from exploring more specific guidance that relates to the subject you are using. The guidance that follows is mainly gathered according to the subject groups that, together with the core, make up the DP.

Language A

Note: Before reading the following guidance, read the “Generic guidance for the extended essay” section in this guide.

What is distinctive about an extended essay in language A?

An extended essay in language A analyses one or more texts to explore both the effects that the text(s) achieve and the devices the text(s) use to create these effects. It invites you to:

- produce an in-depth study of a topic in language and/or literature
- undertake independent literary criticism
- engage with established critical commentary on the text(s) and/or literary theory through textual analysis.

An extended essay in language A must be based on one or more clearly defined text(s), such as:

- a study of a single literary or language text, originally written in the language in which the essay is written
- a comparative study of more than one literary or language text
- a comparative study of a literary and a language text.

When planning a comparative essay, at least one of the primary texts must have been originally written in the language in which the essay is presented, and for which the essay is registered. The other text(s) may be in translation.

Note: An extended essay in language A must be written in the language for which it is registered. You are not allowed to submit a language A extended essay in the language of your language B subject.

Also, extended essays submitted in language A cannot be based on a text studied as part of your studies in the language and literature course. However, you can base your essay on a different text(s) by an author you have studied during the course.

Choosing a topic

Key requirements

- The topic of an extended essay in language A must be related to the target literature and/or language, and be based on one or more texts.
- You may choose as your topic a social, political or philosophical issue arising from the text(s): the focus must be a literature- or language-based analysis of how the text(s) treat the issue.
- The text(s) should **not** be used as documentary evidence to support the issue; rather, the issue must be discussed within a literary context.

- Choosing a topic that simply applies a generic or theoretical convention to a text is self-limiting, and will not yield the kind of in-depth, critical, literary analysis expected. An example of such a self-limiting topic might be “How does the Harry Potter series reveal the Hero’s Journey?”.
- The texts you choose for your topic must have sufficient literary merit. They should be of sufficient stylistic originality and complexity to sustain in-depth analysis of content, themes, genre and literary devices, using subject-specific methods and terminology.

Types of text

Texts can include one or more of the following: novels; poems; stories; plays; pieces of non-fiction; images (like print advertisements or photojournalism); extracts; media texts such as newspaper articles, advertising campaigns, radio and television programmes and their scripts; films; songs; electronic texts such as video-sharing websites and apps, web pages, SMS messages, blogs, wikis and tweets; and oral texts such as readings, speeches, broadcasts and transcripts of recorded conversation. The text(s) must be clearly defined, with temporal boundaries when appropriate, e.g. an individual’s tweets on a specific topic from January to March 2021.

- If you are planning an extended essay that focuses on **short stories or poetry**, ensure that your selection of texts—your body of work—is robust enough to sustain an in-depth 4,000-word essay. There is no precise number of stories or poems that will work best. But remember that the texts should enable you to consider not only what they say but also how they say it, through both the authors’ language and literary devices. The texts should contain enough substance that you can continue to raise and discuss points without overexplaining them or repeating yourself. Determining the best number of stories or poems for your essay will take some effort; rather than focusing on the amount of texts, you might look for complementary texts first—three to four short stories by the same author or three to four poems by the same poet on a particular theme. As you begin to read them analytically, you may realize that three stories yield enough material for an effective comparison and contrast; you may also realize that four poems enable you to deepen your analysis.
- If the text is a **film**, the focus must be clearly on the screenplay (the written or spoken word), its delivery and effect.
- You should try to **avoid biographical, historical, psychological or sociological topics** as they tend to focus away from a literary or language analysis and result in narrative or descriptive essays.

Researching and writing your essay

Literary-based scholarly research is an essential part of your language A extended essay and should include both primary and secondary sources. Primary sources refer to the novels, poems, stories, plays or essays by the author(s) whose work is the focus of your research. Secondary sources are materials written about the work of the author(s), including books (e.g. studies and biographies), individual chapters, journal articles, essays about the work of the author(s), reviews of the work(s), studies of the genre you are writing about, and literary theory. You must integrate into your essay a review of the existing literature on your topic, thereby demonstrating knowledge and understanding.

Be aware that a recently published work may not yet have much critical material written about it, so it may be an unsuitable choice. Also, some “young adult” novels may lack sufficient depth and complexity to allow for a detailed analysis.

When writing your extended essay, take care not to use the essay solely as a vehicle for your personal thoughts and opinions. Instead, first focus your analysis on the ideas within the text(s) as presented by the author(s). Then you can present your considered views of how the author(s) has treated the subject, being careful to ground your analysis in the text(s) and to support it using textual evidence, such as examples and quotes. Writing an essay that simply offers a general overview of the topic or repeats the views of established literary critics will not score well.

Secondary sources provide a framework for a critical analysis of how language, culture and context shape meaning. Summarizing the sources or presenting them without engaging with them critically will not help you to produce a good essay.

Comparative essays need to state clearly what their purpose is, beyond simply identifying similarities and differences between texts. Literary comparisons need to state a compelling and supportable reason for why the texts were selected. Language comparisons need to justify the selection of texts, for example, why certain speeches, advertising campaigns or electronic texts were chosen. The comparative essay also needs to state the temporal boundaries of the texts, that is, which months or years they were published. The essay can briefly discuss how the choice of texts was limited but should not describe the different options considered.

Example topics, research questions and approaches

Note: The following are examples that may help you start to think about your own essay.

However, they should not be interpreted as indicating that a high grade would necessarily be achieved in choosing this particular topic, research question and approach.

Performance in your extended essay is dependent on how effectively your essay combines all three of these in relation to the assessment criteria.

Topic: A critique of social expectations in Victorian drama

Research question: How effectively does Wilde both present and critique social expectations in *The Importance of Being Earnest*?

Outline of approach: Identify various social expectations in the play, for example, of marriage, manners, religion, duty, gender. Through a close reading of the play and attention to language, investigate how effectively Wilde presents and critiques them. Some background research into Victorian society will provide social context, but the focus should be on the play, using relevant quotations to support the interpretation. Secondary scholarly sources should be consulted to support the argument, but they should be considered critically.

Topic: Human and artificial relationships in *Klara and the Sun*

Research question: To what extent and to what effect can Artificial Friends emulate humans to build relationships in *Klara and the Sun*?

Outline of approach: Through close reading, identify the different ways in which Artificial Friends attempt to emulate the human characters around them and build relationships. Through attention to characterization and language, investigate what these relationships show about the possibilities and limitations of technology and humanity. Does Ishiguro privilege one over the other? If so, to what effect? Does he consider them equal? If so, to what effect? Secondary scholarly sources should be consulted to support the argument, but they should be considered critically.

Topic: The role of satire in *Adventures of Huckleberry Finn* and *Candide*

Research question: How and to what effect is satire used in the travels of the main characters in *Adventures of Huckleberry Finn* and *Candide*?

Outline of approach: Investigate how each author creates satire and where it is used in each novel. Do they use satire similarly or differently, for similar or different purposes? What effect is created? Is satire an effective way to communicate the authors' messages? Secondary scholarly sources should be consulted to support the argument, but they should be considered critically.

Topic: The function of ghosts in American novels

Research question: What is the function and effect of the different approaches to ghosts in *Beloved* by Toni Morrison and *The Turn of the Screw* by Henry James?

Outline of approach: Through close reading and contextual research, investigate how Toni Morrison and Henry James use ghosts differently in these two American novels. What kind of ghosts do the authors create and how do these ghosts haunt the characters in each novel? Some background research into the history of slavery, and excited anticipation of the turn of the century (19th to 20th) in the context of "modernism", should provide the context and the comparative element of the discussion. Secondary scholarly sources should be consulted to support the argument, but they should be viewed critically.

Topic: The effect of sexism in vintage advertisements

Research question: How, and to what effect, do Van Heusen menswear ads (1949–1951) use sexism to promote their clothes?

Outline of approach: Select some Van Heusen print advertisements from the years indicated and investigate how they engage sexism through language and image. Analyse the stylistic features to determine how men, women and clothing are portrayed. What is the effect? How do language and image work together to produce this effect? Sources on rhetoric and visual language should be consulted to support the argument.

Topic: The use of rhetorical techniques in motivational speeches

Research question: How effectively do Steve Jobs and Michelle Obama use rhetorical techniques to inspire their particular audiences?

Outline of approach: Through a careful analysis of the rhetorical and emotive devices in Steve Jobs’s commencement speech at Stanford University (2005) and Michelle Obama’s commencement speech at Tuskegee University (2015), investigate how the speakers make and support their arguments. Some research into the context of the speeches (their settings, people discussed within the speeches) will help illuminate how the speakers use both content and devices to motivate their audiences. Compare and contrast how they use both similar and different strategies. Sources on rhetoric should be consulted to support the argument.

Considering the assessment criteria

Make sure you use the extended essay assessment criteria to remind yourself of the expected elements of the extended essay. Each of the five criteria (A–E) is accompanied by a guiding question that should be applied to the context of language A. In this way, you can see how the assessment criteria relate to your own essay. It is important that you also refer to the “[Generic guidance for the extended essay](#)” section of this guide for more complete advice on using the assessment criteria to inform your writing.

<p>A: Framework for the essay</p>	<p>Consider whether you have provided an effective framework for your literary or language-based essay. Check that your research question and your choice of texts, research methods and structural conventions are all suitable for your topic and this subject area.</p> <p>Structural conventions include:</p> <ul style="list-style-type: none"> • an introduction that explains your topic and the focus of your essay, and informs the reader which texts you will be writing about • body paragraphs that build an argument using textual support from primary and secondary sources • a conclusion that considers your answer to the research question in the light of your close readings of primary and secondary sources. <p>You may organize your essay using sections and subsections, with appropriate headings, although you should take care that sections do not lead to a fragmented essay and that headings are not distracting.</p>
<p>B: Knowledge and understanding</p>	<p>Consider whether you have used sources, terminology and concepts that are relevant to an essay on literature or language.</p> <p>Terminology refers to the words that describe the techniques an author uses to create meaning.</p> <ul style="list-style-type: none"> • In a literary essay on a novel or in a language-based essay on a speech, you might note how metaphors and alliteration are used.

	<ul style="list-style-type: none"> • If you are studying poetry, you might comment on how rhyme and enjambment are employed. • If you are writing on drama, you might consider the role of stage directions, props and sound effects (the “plastics” of theatre). • If you are analysing a film, or even a series of print ads, relevant terminology can include the types of shots used: e.g. high angle, close-up. <p>Concepts refer to an idea that occurs throughout a work, such as: dystopia; tragic hero; artificial intelligence; intertextuality; appeal to emotion; logic; authority.</p>
C: Analysis and line of argument	<p>Focus on literary analysis instead of plot description, and include a line of argument that links your analysis to the research question and the conclusion.</p> <p>Literary analysis has two components, as follows.</p> <ul style="list-style-type: none"> • Identification of some characteristic or element in the text • Explanation of the significance or effects of what has been identified <p>So, when you are analysing a text—whether it is literary, language-based or multimodal—you should first identify something within the text and then explain its significance or effects. This leads to an understanding of the meaning of the text.</p> <p>Your explanation could also be considered the answer to a “so what?” question. For instance, in an essay about Gothic fiction, you might identify the various ways in which a ghost haunts a character. You would then want to explain the significance or effects of those hauntings.</p> <ul style="list-style-type: none"> • “So what” that the character is haunted by the ghost in a certain way? What is the effect on the character? • What does that type of haunting say about the ghost? • What is the significance of this haunting in the text as a whole? • How does this haunting illuminate the text? <p>Identifying elements of a text such as actions, relationships and concepts is not enough: analysis needs to include an explanation of their significance or effects.</p>
D: Discussion and evaluation	<p>Consider what a balanced discussion of the findings of your essay looks like in a literary or language-based essay, and ensure that the supporting evidence you have used is appropriate. Evaluate your essay by weighing up the strengths and limitations of your essay.</p> <p>A balanced discussion considers multiple points of view, as well as your own, regarding a text or texts. The discussion is supported using logic and facts obtained through a close reading of both primary and secondary sources. You can also think of balance with respect to a comparative essay as giving equal attention to each of the primary texts you are analysing, instead of privileging the discussion of one text over another.</p>
E: Reflection	<p>Refer to the “Generic guidance for the extended essay” and the “Reflection and the extended essay” sections of this guide.</p>

Language B

Note: Before reading the following guidance, read the “Generic guidance for the extended essay” section in this guide.

What is distinctive about an extended essay in language B?

An extended essay in language B gives you an opportunity to develop your knowledge and understanding of the second language you are studying, and to demonstrate your understanding of the culture associated with that target language. Possible areas to explore include language use, literary analysis or a study of the culture itself. In other words, your language B extended essay can:

- discuss and analyse texts as an inquiry into the way in which language is developed and used by fluent speakers or as literature

or

- focus on the culture of a/the country where the target language is one of the country's main languages of communication, illustrated through a distinctive aspect or item specific to that country.

These approaches can also be combined, depending on the nature of your research question.

In analysing language or literature, you will potentially be applying the target language cultural lens. Your essay may be based on any meaningful example of the use of the language, spoken or written, provided that it is sufficiently linguistically or culturally complex, and can generate academic analysis of a well-constructed research question.

Undertaking a language B extended essay does not require advanced fluency and highly developed writing ability in the target language. However, clarity of meaning and the capacity to address the assessment criteria are important.

Note: It is not permitted to write a language B extended essay in a language that you are studying for your DP in language A.

Texts that have been translated into the language B language are not acceptable as sources. All texts, whether used as the focus of your extended essay or as comparative examples, must have been originally written or spoken in the language B language.

Choosing a topic

Your topic should relate to one of the three areas mentioned above—**literary analysis, language use and development** or a **study of the culture itself**. A combination of these areas is also acceptable.

Topics on literary analysis

Literary analysis covers a discussion of some aspect of a literary work or works originally written in the target language, for example, a literary technique as found in a particular text, a thematic comparison of two works of different periods, a character study.

Works of fiction studied as literature must be originally written in the target language. Nevertheless, there is no requirement that the setting of the work must also be in a geographic area where the target language is spoken. For example, *Romeo and Juliet* by William Shakespeare is set in Italy but was originally written in English, and a work of science fiction or fantasy is often set in other imaginary worlds.

The screenplay of a film (i.e. script and directions) is also acceptable here, but it must be analysed as literature. The discussion should not refer to its cinematographic qualities as these are not language-based; they would likely be more appropriate in extended essays for film or literature and performance.

Topics on language use

An extended essay on language use must focus on the analysis of a particular aspect of the development, structure or use of the target language itself, always in relation to its cultural context or a specific text. An example would be a study of how the language of American rap is influencing teenage communication in

the United States (USA), based on specific rap lyrics. In contrast, an investigation of how second-language students learn English, wherever this may occur, is simply inappropriate: the topic does not investigate aspects of the English language itself.

Note: The texts you choose to investigate **either** as a literary analysis **or** as a study of language use can include a variety of genres, whether spoken or written. But they must also be meaningful examples of language, such as novels, short stories, speeches, advertisements, plays, screenplays, song lyrics and historical documents. There are many “new textualities” that make for a rewarding study, such as literary blogs, micro fiction or graphic novels. Texts need not be traditional prose fiction or non-fiction to qualify as worthy of literary study; however, the availability of a good range of relevant and valuable secondary sources is essential to support the argument in any topic.

Topics studying the culture

If you choose a cultural topic, there are two requirements to consider.

1. The topic must focus on a sociocultural issue specific to the target language.
2. The topic must be investigated through its influence on the form or use of the language itself.

or

The topic must be investigated through its manifestation in customs or artefacts specific to the country where the target language is spoken.

The test of what makes a “cultural artefact” is that it is a concrete object (not a belief or a movement or a state of being) that reflects the target culture in some specific way. A film may be considered a suitable cultural topic but only when approached and analysed as a cultural artefact in the target language. The film needs to be perceived as a concrete object that reflects specific prevailing or changing attitudes or values of the target culture in that language. This is also true of other visual artefacts such as television series.

It is essential that the study promotes understanding of the target language and/or its related culture. Issues that can have relevance to more than one culture, such as certain social and political issues (e.g. religion, racism, the rights of women), are intercultural and therefore not specific enough. Nor are the influence of linguistic trends that are not specific to the target language alone, such as social media acronyms or the use of emoticons. These are not appropriate for studying as a cultural topic because they do not meet the requirements for **focused and detailed research into the target language and/or culture**. Nonetheless, they may be relevant to an extended essay in language and literature or language A, for example.

Researching and writing your essay

As you undertake your research and writing, consider the following advice.

- If you have chosen to analyse literature, ensure that sufficient resources are available, including relevant secondary sources. Be aware that a recently published work may not yet have much critical material written about it, so it may be an unsuitable choice. Also, some “young adult” novels may lack sufficient depth and complexity to allow for a detailed analysis.
- It is expected that most resource materials used for your language B extended essay are written in the target language.
- If you have chosen to research a cultural topic, ensure that you have reliable sources of evidence to support your line of argument. It is challenging to produce high-quality research with student-generated questionnaires because these tend to be subjective and lacking in useful, reliable evidence.

Research based on published material is preferable and usually more reliable than research based on unpublished material.

- Even though you are not writing in your first language, be aware that your extended essay is a piece of academic writing and make sure that your tone and register are appropriate; writing that is too informal may detract from the effectiveness of your essay.

Example topics, research questions and approaches

Language use

Topic: Two American presidents, two acceptance speeches—Comparing and contrasting rhetorical techniques

Research question: To what extent do the inaugural addresses of President Obama and President Trump reflect their different uses of Aristotle’s three rhetorical techniques?

Outline of approach: Research covers Aristotle’s three techniques, ethos, pathos and logos, as well as a brief background to the purpose of the speeches. Analysis investigates extracts from the two selected speeches, comparing three examples in each of the use of these techniques, the effects intended and how the speeches’ contrasts are reflective of the different personalities and agendas of the speakers.

Literary analysis

Topic: The personification of Death as a narrator in *The Book Thief* by Marcus Zusak

Research question: How does the personification of Death as a narrator provide an empathetic or an objective perspective for the reader in *The Book Thief* by Marcus Zusak?

Outline of approach: A literary examination of the methods employed to develop the personification of Death, including consideration of narrative analysis, discourse analysis and graphical layout, concluding with an assessment of the extent to which these methods have been successful in gaining the reader’s empathy. In addition to a close reading of the novel, literary theory and literary articles are studied as secondary resources to support and deepen the insights given.

Cultural study

Topic: The industry of American values—Advertising techniques in the USA

Research question: To what extent does Coca-Cola promote American values in its ads to appeal particularly to American society?

Outline of approach: Investigation of three values—optimism, individuality and equality—and how they are characteristic of American society. A study of six advertisements, aired during the Super Bowl, analysed as cultural artefacts, showing the techniques used to promote Coke as reflecting these values. Resources would include texts and articles on advertising techniques, on the Coca-Cola company’s ideology, and on social attitudes in the USA. Images of ads should be included and properly referenced.

Topic: Political rap and racism in the USA

Research question: To what extent can the song “I’m Not Racist” by Joyner Lucas tell us about currently experienced racism in the USA?

Outline of approach: The investigation covers a brief background to political rap in US culture and its focus on racism. The context of the singer and the song is outlined. Then the lyrics are analysed in detail, highlighting cultural topics such as stereotypes, police brutality, social negligence and protest movements. These are compared with news reports, polls and statistics on modern racism to determine whether the song is a reliable reflection of reality. Discussion and analysis include references to the history of racism in the USA, political rap and Lucas, and in particular, the analysis of the lyrics or poetry.

Considering the assessment criteria

Make sure you use the extended essay assessment criteria to remind yourself of the expected elements of the extended essay. Each of the five criteria (A–E) is accompanied by a guiding question that should be applied to the context of language B. In this way, you can see how the assessment criteria relate to your own essay. It is important that you also refer to the “[Generic guidance for the extended essay](#)” section of this guide for a broader spectrum of advice on using the assessment criteria to inform your writing.

A: Framework for the essay

The introduction must include a statement explaining how the topic fits the criteria. A suggestion is to include in your introduction an explanation of how responding to your research question is developing your knowledge and

	<p>understanding of the second language you are studying, as well as the culture related to this. For example, you might explain that English and Anglophone culture are not the same as Western culture. Also, indicate why your topic is worthy of investigation.</p> <p>Structural conventions</p> <p>Unless there is a specific analysis of an advertisement or artwork to illustrate the culture of the target language, supporting images are generally not appropriate nor useful in the body of your essay. If used, they must be properly referenced.</p> <p>If poetry or song lyrics are the focus of your analysis, all significant extracts and examples should appear in context, in the relevant places in the body of your essay. The full text can be included in an appendix if you feel that is useful, but do note that the examiner is not required to read appendices.</p> <p>Any quotations or titles that are not in the target language must have a translation included.</p>
<p>B: Knowledge and understanding</p>	<p>Understanding—Terminology: When you use specific literary terms, you need to show clearly that you understand their meaning and application to your topic. Try to work terminology into writing your paragraphs. Here are two examples.</p> <p>Symbolism: “The symbol of the lighthouse on the clifftop enriches the atmosphere. It is more than a literal light; it also suggests guidance, comfort in the dark and the possibility of finding a safe harbour. At irregular moments in the novel, it appears again, each time suggesting guidance, security or the safe end of a perilous voyage.”</p> <p>Irony: “The opening sentence of Jane Austen’s <i>Pride and Prejudice</i> is a good example of irony: ‘It is a truth universally acknowledged that a single man in possession of a good fortune, must be in want of a wife.’ Austen is mocking the obsession of mothers at that time to find suitable husbands for their daughters, regardless of the feelings of the men or indeed of the daughters themselves.”</p> <p>Understanding—Concepts: Use examples and quotations from your research materials to show your understanding of the key concepts you are using.</p> <p>For example, gender roles and social norms: “The strict social and gender norms that were enforced on women at the time [Victorian England] served as the foundation for Jane Eyre’s emergent feminism. Bronte’s portrayal of Jane’s unflinching spirit, her rejection of social norms and her refusal to be restricted to predetermined gender roles serves as a potent mirror of the feminist battles that women of her age had to fight.”</p>
<p>C: Analysis and line of argument</p>	<p>Here is an example of an analysis of the role of Boxer in <i>Animal Farm</i> by George Orwell:</p> <p>“Orwell uses Boxer to represent the working class, as dedicated but helpless victims of totalitarianism ... He highlights their exploitation by showing how Boxer works long hours without any type of reward. Boxer’s trademark slogan, ‘Napoleon is always right’, shows how workers are not even aware of their miserable reality.”</p> <p>The quote above is part of a line of argument that traces the roles of the main symbolic characters in the novel. All of the characters and symbols are explored independently and then connected in the conclusion to Orwell’s attempt at highlighting the flaws and corrupt ideals that this political system essentially embodies.</p>

D: Discussion and evaluation	<p>An example of discussion: “The film <i>Green Book</i> is a cultural artefact that reflects issues around racism in the southern USA at that time. It goes further and explores the situation of immigrants, in this case Italian, in an interesting contrast with the wealthy Black pianist.”</p> <p>An example of evaluation: “Despite Hurston’s skill of conveying themes through characters in her novel <i>Their Eyes Were Watching God</i>, there is a lack of consideration towards the sensitivity of some readers. The pervasive use of erotic narration in portraying love and marriage can be regarded as highly controversial. However, the portrayal of the emancipation of a young Black woman is relevant to today’s society.”</p>
E: Reflection	Refer to the “ Generic guidance for the extended essay ” and the “ Reflection and the extended essay ” sections of this guide.

Classical languages

Note: Before reading the following guidance, read the “[Generic guidance for the extended essay](#)” section in this guide.

What is distinctive about an extended essay in classical languages?

An extended essay in classical Greek or Latin provides you with an opportunity to investigate non-trivial, in-depth topics in the context of the ancient Greek and Roman worlds.

You may choose to focus either on linguistic features of classical Greek or Latin, or to investigate a particular aspect of classical Greek or Latin literature or of classical Greek or Roman culture and civilization. However, since language, literature, culture and civilization are closely interwoven, it is appropriate for you to study language in the context of literature, culture and civilization, and literature, civilization and culture as presented through the classical Greek or Latin languages.

Note: For classical languages, you will submit your extended essay in either English or Spanish, depending on your language of registration.

An extended essay in classical languages requires you to engage with sources written in classical Greek and Latin, so you must also have sufficient proficiency in these.

Choosing a topic

A suitable topic will normally focus on an in-depth aspect of the language, literature or civilization of the classical Greek and Roman world, ideally a topic where scholarly opinion is divided.

You should keep in mind the availability of sources. If the essay is related to a fundamental and canonical writer such as Virgil, it is probable that you will be able to find a plentiful number of sources. On the other hand, if you focus on a less common topic, you need to make sure that you can support your line of argument with appropriate evidence and source sufficient secondary materials to help you substantiate your claims.

Your brief is to choose a topic that allows you to engage in a deep and focused study of the classical Greek and Roman worlds themselves, displaying your ability to apply the methodology and concepts relevant to classical studies. You should avoid comparisons between classical topics and the way these topics are shaped in modern or contemporary cultural endeavours. A comparison of slavery in Rome with the ways it is portrayed in Hollywood films, for instance, is not an appropriate research topic, nor is examining the use of Greek mythology in contemporary literature or art. An example of a suitably constructed research question would be: “To what extent is Clytemnestra’s murder of Agamemnon presented as justified in Aeschylus’ *Oresteia*?”

A well-defined, focused topic helps you to understand the culture and civilization of the classical world in its context. For example, Aeneas and Augustus’ rise to power is a suitable topic to research, since it prompts

you to investigate and analyse a literary work in its historical context. As you build your research question, you need to consider the context at the time the texts or the cultural artefacts existed. It is best to avoid topics that do not generate controversy because these are likely to lead to a mainly narrative treatment and may not be focused on the time and context in which the works were created.

You should also be aware that focusing on your subjective perception of a text, speculating about the author's intentions or overlaying contemporary values to a classical text or cultural artefact will not result in an effective essay.

Researching and writing your essay

To research your topic effectively, you will need to access primary sources through digital libraries of Latin and Greek texts, or if possible, use academic editions of works in Greek and Latin. You will also need to find suitable secondary sources that will help you to build the argumentation in your essay. Well-known academic publishers should be your preferred choice for reliable sources. You can also use other source materials that are relevant to your topic, such as works of art, architecture and material culture.

If the focus of your essay is linguistic, you must show that you understand the morphology and syntactic structure of the language, and how these elements are used within the text(s) you have chosen.

If the focus of your essay is on literature, you should show an awareness of a work read, at least partly, in the original Greek or Latin. You need to identify, analyse and evaluate links between the literature, language and culture, considering their relevance to your argument.

If the focus of your essay is on the ancient civilization concerned, you should show clear evidence of substantial background reading and an awareness of the major historical and cultural features at work in this setting. Links between the language, literature and culture should be identified and scrutinized.

Example topics, research questions and approaches

Latin

Topic: Temples in the time of Augustus

Research question: Why did Augustus give temples such prominence in his building programme?

Outline of approach: A thematic and historical analysis of Augustus' building programmes using primary sources such as Suetonius.

Topic: The treatment of Augustus in Horace's literature

Research question: To what extent does Horace praise or blame Augustus in his *Odes*, *Epodes*, *Satires* and *Carmen Saeculare*?

Outline of approach: A study and analysis of Horace's attitude towards Augustus in his most important literary works.

Topic: Seneca and the control of emotions

Research question: To what extent could Seneca help us to control emotions in *De Ira* and *Epistulae Morales*?

Outline of approach: An analysis and evaluation of the way our emotions could be controlled following Seneca's philosophy of life.

Greek

Topic: The cause of Socrates' death

Research question: To what extent were Socrates' political associations the cause of his death?

Outline of approach: An evaluative analysis of Socrates' political associations is seen through Plato and Aristophanes, and the historians' accounts of the Peloponnesian Wars, ancient Greek culture and philosophy.

Topic: Gender norms of women in the literature of Aristophanes

Research question: To what extent does Aristophanes subvert or conform to the gender norms of women in the late 5th century and early 4th century BCE in *Lysistrata*, *Thesmophoriazusae* and *Ecclesiazusae*?

Outline of approach: A historical and textual analysis of women’s lives in 5th and 4th century Greece, and the way women act in Aristophanes’ plays and to what effect.

Topic: The concept of justice in Greek religion as displayed in Aeschylus

Research question: To what extent do the Greek Gods dispense justice fairly in *Prometheus Bound* and *The Eumenides* of Aeschylus?

Outline of approach: A study of the concept of justice in Greek religion and the particular way it is displayed in Aeschylus, and its implications for the overall concept of justice.

Considering the assessment criteria

Make sure you use the extended essay assessment criteria to remind yourself of the expected elements of the extended essay. Each of the five criteria (A–E) is accompanied by a guiding question that should be applied to the context of classical languages. In this way, you can see how the assessment criteria relate to your own essay. It is important that you also refer to the “[Generic guidance for the extended essay](#)” section in this guide for a broader spectrum of advice on using the assessment criteria to inform your writing.

A: Framework for the essay	Research methods: Greek and Latin studies have several digital libraries and academic presses, well-known publishing houses and academic journals that can be traced through databases. Sources used in the research process, whether by classical authors or modern commentators, should be carefully evaluated and their reliability assessed.
B: Knowledge and understanding	<p>Knowledge: You should show the current state of the field of study under investigation and display a well-grounded historical, social and cultural context. If the focus of the extended essay is literature, you should show an awareness of a work read, at least partly, in the original Greek or Latin. Your essay should reveal an understanding of how the author exploits the language to create specific effects.</p> <p>Understanding—Terminology: Where relevant, show an understanding of the specific terminology that relates to an investigation into classical Greek and Latin, such as: morphology, particle, scansion, syntax, works of reception.</p> <p>Understanding—Concepts: Of relevance to conceptual understanding is the relationship between form—of a word, sentence, text or even a piece of art or material culture—and the meaning it conveys. Also of relevance is how audience, context and purpose interact to help or hinder us as we seek to interpret a text or answer a question about the classical world. It is important that you show awareness of the cultural and historical significance of ancient literature, art and institutions in their own context.</p>
C: Analysis and line of argument	Your classical language topic is likely to be contentious in that there is no right or wrong answer, and people continue to debate the classical topics you will be writing about. For this reason, your line of argument needs to balance counterarguments and be able to be followed throughout your essay. Make sure that you have evidence to support your statements.
D: Discussion and evaluation	Evaluation can include determining who has written a piece of evidence you are using and why they were writing it.
E: Reflection	Refer to the “ Generic guidance for the extended essay ” and the “ Reflection and the extended essay ” sections of this guide.

Individuals and societies

Note: Before reading the following guidance, read the “Generic guidance for the extended essay” section in this guide.

What is distinctive about an extended essay in individuals and societies?

An extended essay in the individuals and societies subjects explores a question that connects to human experience and behaviour across time and space. If you are interested in developing a critical understanding of the complexities of our social world and who we are as humans, an extended essay in individuals and societies will be a very rewarding choice.

The subjects in this group include business management, digital society, economics, geography, global politics, history, philosophy, psychology, social and cultural anthropology and world religions. These disciplines approach questions about the individual and collective dimensions of existence from multiple perspectives, providing different concepts, contexts, theories and methods for the study and understanding of a complex world filled with difference and variation.

Writing an extended essay in individuals and societies will give you the opportunity to:

- challenge cultural assumptions or contest definitions and descriptions of the social world or assumptions about human nature
- develop, through an in-depth study, a critical inquiry into the human condition and its possibilities
- increase your knowledge of a subject within individuals and societies by exploring relevant subject literature
- select different theories and/or concepts in individuals and societies subjects, then apply suitable methodologies to formulate an argument
- develop a more informed and less naive understanding of the dynamics of the social world.

Choosing a topic

Individuals and societies subjects naturally lend themselves to a wide variety of potential topics for the extended essay. The subjects in this group can tackle many big questions about our shared present, past and future. Topics could revolve around real-world issues such as the environmental and climatic crisis, the future of global capitalism, migration, governance in a digital age, and so many others. The big issues related to human experience and social life can be posed as well-focused questions that explore these issues within these disciplines’ perspectives.

The choice of a topic in individuals and societies could result from your own personal life experience, from issues of contemporary debate. Or it could be an extension of a topic covered in one of your favourite subjects, or even a topic related to but not covered by your favourite subject.

Your topic needs to be considered in terms of one of the subjects in individuals and societies. Although, often, a topic could be approached from more than one individuals and societies subject and from many different perspectives. For example, if your interest is in sport, your topic could be researched and written as an essay in different, distinct subjects.

Subject	Approach
Global politics	Explore global discourses around women in sports and how these influence political decisions about gender rights.
Business management	Analyse a case study involving a brand sponsoring a football club.

What makes these topics effectively grounded in one of these diverse subjects is the way in which they are approached. It is not a matter of a given content but rather the concepts, methods and perhaps theories relevant to the subject that will provide insights and will allow you to develop well-constructed arguments.

Researching and writing the essay

In general, most DP extended essay subjects require the use of primary research sources, in addition to mandatory secondary sources. However, this is not always the case.

- **Social and cultural anthropology:** The IA is based on primary sources, including fieldwork. But for the extended essay, it is only permitted to use primary sources as a supplement to secondary data and sources: the extended essay must be based on existing ethnographic material(s).
- **Psychology:** An extended essay must be based on secondary sources only. The collection of primary data is not permitted.

The subjects in the individuals and societies group are varied and diverse. As a consequence, your knowledge of the discipline's approaches and perspectives is very important when researching and writing your extended essay.

Although all extended essays must include secondary research (literature review), different subjects will require different types of sources from which to gather information and construct your line of argument. It is important that you understand what constitutes an appropriate primary or secondary source in your subject of choice, as well as which methods are suitable. For example, in history, primary sources convey first-hand experience of the event or time period you are studying, while secondary sources interpret and analyse primary sources.

You must consider what an extended essay in your subject requires in terms of sources and methods because this is not the same in all subjects. For example, in world religions, the *Bhagavad Gita* sacred text is a primary source that can be analysed in depth in view of a chosen theoretical framework as a strategy to follow. In psychology, on the other hand, the extended essay is a review of literature; that is, an analysis of peer-reviewed research. The approach here is based on secondary sources only. In other subjects, such as global politics or social and cultural anthropology, relevant academic secondary sources will substantiate your line of argument, which may or may not be supplemented with primary data collected through appropriate methods.

Comparisons, case studies, discourse analysis, critical analysis of a theory or concept and in-depth analysis of a primary source are all possible research strategies through which you may construct a line of argument within individuals and societies. In a successful essay, this line of argument sticks to the logic of the discipline, uses specific terminology and follows disciplinary style and structural conventions. It is important that you seek advice from your supervisor and refer to the subject guide for the subject you have chosen to make sure you are making appropriate use of sources, methods, approaches and research strategies.

Example topics, research questions and approaches

Subject	Topic and research question	Outline of approach
Business management	<p>Topic: How McDonald's trains its managers in the USA: The Hamburger University in Chicago</p> <p>Research question: To what extent is McDonald's Hamburger University an optimal form of training?</p>	<p>The in-house training courses offered by McDonald's are described and evaluated, using secondary sources, supported by the findings from primary research. Primary research: interviews with trainers who work at Hamburger University and surveys of graduates from that school.</p>

Subject	Topic and research question	Outline of approach
	<p>Topic: McDonald's charitable work: Ronald McDonald House Charities (RMHC)</p> <p>Research question: Who benefits more from the relationship: RMHC or McDonald's?</p>	<p>Many academic articles have recently been published about RMHC, both to praise the charity but also to criticize the fact that donations could be more substantial. Using secondary data only, this extended essay discusses the advantages and disadvantages of the relationship between McDonald's and RMHC.</p>
Digital society	<p>Topic: Democracy in an age of misinformation</p> <p>Research question: How has the increase in information shared on social media challenged democratic institutions? The case of Cambridge Analytica.</p>	<p>Case study: Cambridge Analytica</p> <p>Research: Secondary sources such as podcasts, television or internet documentaries, books, news articles.</p> <p>Possible sources: Publications by Cambridge Analytica and talks given by its executives; Mark Zuckerberg's testimonies before Congress; examples of Facebook ads published during the scandal.</p> <p>Analysis: Explore the impacts on the essential components of democracy.</p>
	<p>Topic: The transformation of factory work by automation</p> <p>Research question: To what extent has factory work been transformed by automation in the last decade? To what extent can productive work cultures be maintained with robo-colleagues?</p>	<p>Research trends in factory automation, contextualization in specific factories.</p> <p>Select a case study to focus on, e.g. the use of drones to make deliveries for a certain company.</p> <p>Consider the relevant stakeholders to the transformation, such as employees, managers, consumers, tech providers.</p> <p>Use secondary sources to examine existing coverage of the case study or similar studies. Evaluate their methodologies to see if they could be adapted for your essay's purposes.</p> <p>Research the impacts: Use primary sources such as trends in financial statement over time at a specific company (before, during and after the implementation of factory automation), interviews with employees or shadowing a worker).</p>

Subject	Topic and research question	Outline of approach
		Discuss the impacts on the key stakeholders to arrive at an answer to the research question.
Economics	<p>Topic: Minimum wage theory</p> <p>Research question: Does current economic research into minimum wage invalidate the neoclassical argument that increasing the minimum wage will lead to increased levels of unemployment?</p>	<p>Neoclassical economics argues that increases in the minimum wage will lead to higher levels of unemployment. However, new research and new economic thinking argues that this is not the case and it was based on flawed assumptions.</p> <p>The neoclassical argument is researched and presented. The counterarguments are researched and evaluated in terms of the nature of the evidence and studies that have been carried out.</p> <p>This essay can use recent evidence from news articles or data banks to assess the link between minimum wages and unemployment in different places.</p> <p>Throughout the essay, conclusions to independent points of analysis help build the argument and identify how valid the neoclassical model is.</p>
	<p>Topic: The role of mobile banking in economic development</p> <p>Research question: How has increased access to mobile banking contributed to economic development in town (or village) "X" since 2010?</p>	<p>This essay carries out primary research on the ways mobile banking can contribute to economic development, in theory.</p> <p>The research includes data obtained by others through randomized control trials. It focuses on relevant aspects of development: higher incomes, improved health outcomes, improved education outcomes, empowerment of women, increased civic participation.</p> <p>Primary research leads to an evaluation of the extent to which economic development has occurred in the area investigated.</p>
Geography	<p>Topic: Mangrove zonation</p> <p>Research question: What are the most important factors that contribute to the biodiversity of mangroves in Singapore?</p>	Using a mangrove zonation model, primary data is collected on variables such as species, coverage, height, soil pH and infiltration rates.

Subject	Topic and research question	Outline of approach
	<p>Topic: An investigation of the correlation between gender equality and socioeconomic development in the different neighbourhoods of Rio de Janeiro</p> <p>Research question: To what extent does socioeconomic development affect gender equality in the neighbourhoods of Rio de Janeiro?</p>	<p>This is then mapped along several points on the coast of Singapore to determine whether the patterns match the model.</p> <p>Census data, figures from the Human Development Index (HDI) and other socioeconomic indicators are collected.</p> <p>A “Gender Index” is developed based on similar pre-existing indices.</p> <p>To test correlations, a geographic information system (GIS) is used to map the resulting patterns, graphs and statistics.</p>
Global politics	<p>Topic: Women, power and conflict</p> <p>Research question: To what extent is female leadership better at facing conflict? Responses to terrorist attacks in New Zealand and France.</p> <p>Topic: Big data, apps and human rights</p> <p>Research question: To what extent is the large amount of personal data collected by mobile apps a breach of the right to privacy? The case of Snapchat in the European Union (EU).</p>	<p>Literature review of concepts of power, conflict, terrorism, leadership, feminism in politics and soft power.</p> <p>Analysis of cases of terrorist attacks and responses in both countries during Jacinda Ardern’s and Emmanuel Macron’s tenures as Prime Minister of New Zealand and President of France, respectively.</p> <p>Evaluation of the situations, reaching a conclusion that links facts with theories.</p> <p>A review of the literature on the concepts of big data, human rights, universalism, interdependence, indivisibility, the right to privacy, and data protection.</p> <p>Analysis of the personal data needed for downloading and using the app. Analysis of the privacy policy.</p> <p>Facts are linked with the key concepts to develop an argument and conclusion, answering the research question.</p>
History	<p>Topic: The collapse of the Soviet Union in 1991</p> <p>Research question: To what extent was the collapse of the Soviet Union in 1991 caused by</p>	<p>This question provides a narrow focus to an otherwise overly broad topic. The key policies to be discussed would be the changes to the Soviet Union’s constitution in 1988, and the impact these had</p>

Subject	Topic and research question	Outline of approach
	the political reforms of Mikhail Gorbachev?	<p>on the political structure of the state: allowing, eventually, for greater openness and a measure of democracy.</p> <p>Other factors that may also be considered as contributing to the collapse of the Soviet Union are the discontent resulting from the failure of economic policies, the failure to win the war in Afghanistan, the “loss” of the Baltic states, and the growth of nationalism, perhaps most significantly in Russia.</p>
	<p>Topic: The women’s suffrage movement in New Zealand</p> <p>Research question: What was the significance of the Women’s Christian Temperance Union (WCTU) in gaining the vote for women in New Zealand?</p>	<p>In 1893, New Zealand was the first country to grant all women citizens the right to vote.</p> <p>One approach to this question could be to consider the importance of the WCTU in two senses. First, galvanizing women to get involved in politics to achieve the moral improvement of society. Second and following on from this, to agitate for suffrage.</p> <p>Other factors such as the support of the Liberal Party and the increasing number of professional women with an education were also important.</p>
Philosophy	<p>Topic: Art and nature in H.-G. Gadamer’s essay “The Speechless Image”</p> <p>Research question: To what extent is art a reflection of nature in relation to H.-G. Gadamer’s essay “The Speechless Image”?</p>	<p>The theoretical frame of the research question could be: phenomenology and Gadamer’s hermeneutical approach, focused on our experience of art.</p> <p>Identification and presentation of relevant theses in the primary source, “The Speechless Image”.</p> <p>Discussion would include comparing and contrasting Gadamer’s approach with Kant’s writings on art and nature, and critiques of Gadamer’s work from secondary sources.</p> <p>Evaluation would consider the extent to which art is a reflection of nature.</p>
	Topic: The Marxist theory of alienation	The frame of the research question is social philosophy.

Subject	Topic and research question	Outline of approach
	<p>Research question: To what extent is the Marxist theory of alienation in <i>Economics and Philosophy Manuscript of 1844</i> a sublation of Feuerbach's alienation theory?</p>	<p>Presenting the theory of alienation in the primary source by Marx, and Feuerbach's position. Using secondary sources.</p> <p>Discussion of the relationship between Marx and Feuerbach on the issue. Justification of the answer given to the research question.</p>
Psychology	<p>Topic: The struggles of a "perfect" athlete</p> <p>Research question: Does being a perfectionist have a detrimental effect on performance in team sports?</p>	<p>Sporting performance is operationalized (giving an abstract idea a measurable set of criteria, which can be researched), and a single sport is investigated. This definition must be consistently applied throughout the essay.</p> <p>Evidence is provided to both support and challenge the idea that perfectionism may have a detrimental effect on performance.</p>
	<p>Topic: The effectiveness of cognitive behaviour therapy (CBT) and mindfulness in stress management</p> <p>Research question: Is mindfulness or CBT a more effective means of coping with stress?</p>	<p>Although it is important to outline the key assumptions made by each of these two approaches to treatment, this should not be a significant part of the essay.</p> <p>The research should compare evaluated published research findings supporting each type of explanation, having linked the studies to relevant psychological theory. A balanced argument could evaluate evidence claiming support for partial and final conclusions.</p>
Social and cultural anthropology	<p>Topic: The concept of performance within anthropological theory—its interpretation and application in three contemporary ethnographies about the body</p> <p>Research question: How useful is the concept of performance to explain bodily experiences in women's current political demonstrations from a feminist theoretical perspective?</p>	<p>This essay addresses a relevant discussion of a concept in contemporary social theory. There is an analysis of the concept by reading ethnographies and subject literature on the topic.</p> <p>The essay contextualizes the concept within specific schools of thought and discusses its application in some selected ethnographies used as comparison, and assesses its theoretical value.</p>

Subject	Topic and research question	Outline of approach
	<p>Topic: Influences of witchcraft on the women of the Bhil tribe in India</p> <p>Research question: To what extent do witchcraft beliefs influence the women of the Bhil tribe?</p>	<p>Witchcraft is critically discussed and linked to the concept of causation by exploring diverse theories, including those of Edward Evan Evans-Pritchard, Claude Lévi-Strauss, postmodern approaches and feminist theory.</p> <p>The essay examines the centrality of witchcraft beliefs and practices in shaping the religious, social and economic roles of women within the tribe today.</p> <p>It does this through secondary sources, supplemented by primary research (interviews).</p>
World religions	<p>Topic: An examination of differences between Reform Jews and Orthodox Jews regarding female ordination</p> <p>Research question: Why are Orthodox Jews more resistant to females being ordained as pulpit rabbis than Reform Jews?</p>	<p>A reading of Hebrew texts and Talmud that addresses the question of women’s ordination. This is carried out through the lens of feminist approaches to religion and gender.</p> <p>In-depth interviews, with a well-structured interview protocol, are used for both Reform and Orthodox respondents.</p>
	<p>Topic: Investigating trends in Evangelical conceptions of Christian eschatology</p> <p>Research question: To what extent can Evangelical conceptions of Christian eschatology result in internal inconsistencies within Evangelical theology?</p>	<p>Through a theological inquiry, the research will probe divergent opinions on some sub-events in Christian eschatology, such as death, Parousia, resurrection, judgement and the rapture.</p>

Considering the assessment criteria

Make sure you use the extended essay assessment criteria to remind yourself of the expected elements of the extended essay. Each of the five criteria (A–E) is accompanied by a guiding question that should be applied to the context of individuals and societies. In this way, you can see how the assessment criteria relate to your own essay. It is important that you also refer to the “[Generic guidance for the extended essay](#)” section in this guide for a broader spectrum of advice on using the assessment criteria to inform your writing.

A: Framework for the essay	<p>Make sure your focused research question and research methods clearly align with the individuals and societies subject you are using. It may be a good idea to refer to the subject guide for that subject to confirm that you understand the nature of the subject and its methodology—you are investigating your topic through the lens of your chosen individuals and societies subject.</p>
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	Structural conventions relating to individuals and societies subjects include: clearly labelling diagrams, maps (that have all the required elements, such as scale and a key/legend), images and graphs, acknowledging if these are the work of others, and actively referring to them in the body of your essay; appropriate use of headings to organize your essay where appropriate.
B: Knowledge and understanding	<p>Each individuals and societies subject will have its own terminology, technical words and other special words or phrases that are used in that subject. Using this terminology identifies you as someone who understands the nature of the subject, e.g. “supply and demand” in economics or “digital systems” in digital society.</p> <p>Using important concepts in the subject in a meaningful and explanatory way in your writing demonstrates your knowledge and understanding. Application of key concepts in your writing is essential. For example, in a history extended essay you are likely to work the concepts “causation” and “consequence” into your essay. In social and cultural anthropology, you might apply a concept such as “marginalization” to show your understanding of a topic concerning the social exclusion of a group of people.</p>
C: Analysis and line of argument	Regardless of the individuals and societies subject you are using, when you “own” the theories, concepts and methods of that subject, and can weave your research findings towards conclusions that answer your research question, you will have produced a strong line of argument that links your analysis to the research question and the conclusion.
D: Discussion and evaluation	<p>Consider what a balanced discussion looks like in an essay written in your subject. Review good examples of extended essays and other academic essays in that subject, and ensure that the supporting evidence you have used is appropriate. Evaluate by weighing up the strengths and limitations of your essay.</p> <p>A balanced discussion considers different perspectives on your topic. For example, a social and cultural anthropology essay exploring elements of cultural control in the context of neocolonialism could include discussions stemming from analysing the perspectives of the different stakeholders involved.</p>
E: Reflection	Refer to the “ Generic guidance for the extended essay ” and the “ Reflection and the extended essay ” sections of this guide.

Sciences

Note: Before reading the following guidance, read the “[Generic guidance for the extended essay](#)” section in this guide.

What is distinctive about an extended essay in the sciences?

An extended essay in any of the science subjects—biology, chemistry, computer science, design technology, physics, and sports, exercise and health science—offers the opportunity to investigate and collect primary or secondary data, based on a focused research question. You collect evidence using scientific methodology. Your findings must lead to a valid, evidence-based conclusion.

Science essays can be characterized by the development of hypotheses, replicable data and the use of peer-reviewed publications. These three processes differentiate a scientific process from a pseudoscientific one.

A good extended essay is based on accepted, subject-specific methodology, requires a good understanding of the underlying concepts and uses appropriate terminology. Science extended essays based on primary data must use controlled, independent variables and a standardized methodology that makes the research applicable and allows valid conclusions to be drawn. For example, a good extended essay in biology could explore the anti-proliferative effect of anthocyanin. An extended essay in design technology could focus on new technologies and how they influence existing technologies.

Choosing a topic

When choosing a topic in any of the sciences, you must be realistic and mindful of the facilities at your disposal. The topic must have a strong focus on the subject for which the extended essay is submitted. Avoid topics that are beyond the scope and timeline of an extended essay or would involve lengthy research using sophisticated laboratory equipment not usually found in school laboratories (labs). Also be careful not to choose a topic where collecting sufficient data to answer the question is infeasible because it would be unethical or impractical.

Extended essays based on simple experimental data are just as valid as research conducted in university labs or hospitals. Obviously, the chosen topic must be of interest to you. Preferably, you already have some knowledge of the theory and understand the concepts. Conceptual understanding applies even more when writing an extended essay based on secondary data. Be aware that published (scientific) literature sometimes assumes knowledge and understanding that is higher than the level expected of a DP student; this can be challenging but also rewarding. You need to stay focused on valid analysis that leads to credible, evidenced conclusions. An additional aspect of basing an extended essay on secondary data is that the scientific articles or databases must use a similar standardized approach and controls, and preferably similar methodologies.

The basic premise when choosing a topic for an extended essay is not to overcomplicate it: keep it manageable within the time you have.

Example topics, research questions and approaches

Subject	Topic and research question	Outline of approach
Biology	<p>Topic: KNO_3 concentrations and growth rate</p> <p>Research question: What is the effect of increasing KNO_3 concentrations (0.1 mM, 0.2 mM, 0.3 mM, 0.4 mM, 0.5 mM) on the growth rate of onion roots (<i>Allium cepa</i>)?</p>	Independent variables, such as increasing nitrate concentrations, may have to be fine-tuned. Some concentrations may lead to the death of the plants. A pilot experiment is recommendable, as well as comparing with published (scientific) concentrations.
	<p>Topic: Parity as a measurable variable in the development of breast cancer</p> <p>Research question: To what extent is parity a measurable variable in the development of breast cancer?</p>	Studies from different countries reporting rates of breast cancer and associated risk factors are accessed using PubMed, Directory of Open Access Journals (DOAJ), JSTOR, Google Scholar and Science Direct. Studies are selected using a set of predetermined criteria that are clearly explained. The data from the selected journal articles is analysed and evaluated in a way that allows valid comparisons to be

Subject	Topic and research question	Outline of approach
		made. It must then be made clear how the data has been interpreted and manipulated.
Chemistry	<p>Topic: The effect of manganese oxide versus copper (II) oxide in the catalysation of hydrogen peroxide</p> <p>Research question: What is the effect of manganese oxide versus copper (II) oxide in the catalysation of hydrogen peroxide at 21 °C?</p>	<p>Begin by gathering background information regarding decomposition of hydrogen peroxide and different catalytic pathways and mechanisms. Practical research is undertaken with careful selection of variables. Comparative graphs are produced showing the results and interpreting them using theory.</p>
	<p>Topic: The electronegativity of the distinctive atom in inorganic mono-oxoacids</p> <p>Research question: How does the electronegativity of the distinctive atom in inorganic mono-oxoacids affect its pKa values?</p>	<p>This can be typical data-based research. The background information initially gathered should consider appropriate acid-base theory, the definition of pKa and the inductive effect. Several sources must be used to determine values for dependent and independent variables. The results are shown in a graph that can be analysed using the main theoretical issues.</p>
Computer science	<p>Topic: The speed of execution of algorithms</p> <p>Research question: To what extent does the type of core (logical or physical) of a modern central processing unit (CPU) influence the speed at which algorithms are executed?</p>	<p>The essay investigates whether logical cores, using techniques such as hyperthreading, can be a viable alternative to the implementation of several more expensive physical cores. The technical details of both types of cores must be investigated prior to a benchmarking experiment that compares the running of different algorithms with large datasets.</p>
	<p>Topic: Classification of malignant cancer</p> <p>Research question: To what extent is a feed-forward neural network more accurate in classifying malignant cancer compared to k-nearest neighbour (KNN)?</p>	<p>The essay initially includes information on the theoretical background, including explanations on how the two algorithms are set up with respect to their parameters. The experiment then compares the two approaches. The two algorithms are constructed and evaluated using various Python libraries including Scikit, TensorFlow and Keras. An appropriate data set modified to better fit the experiment can be downloaded from the University of California (UCI).</p>

Subject	Topic and research question	Outline of approach
Design technology	<p>Topic: Sustainable design of egg packaging</p> <p>Research question: What is the most appropriate design for sustainable egg packaging suitable for food retailers in markets in Vietnam?</p>	<p>Establish primary evidence of the existing problem. You can include interviews with retailers and customer surveys. This is followed by a consideration of primary packaging, form, function and sustainability research.</p> <p>The essay then covers the selection of material and the construction of fidelity prototype models (physical or digital) made by the student to test the safety of packaging. Environmental impacts are also considered.</p> <p>Later steps are the selection of designs for field testing and feedback. Finally, develop a fidelity model solution and test it against the intended users' needs.</p>
	<p>Topic: The impact of circular economy practices on sustainability in the fashion industry</p> <p>Research question: What improvements can large fast fashion retailers make to minimize waste, maximize resource efficiency and promote sustainability?</p>	<p>Secondary research investigates circular economy practices within the fast fashion sector, highlighting that a more comprehensive approach can address environmental concerns and promote sustainable and circular practices throughout the product lifecycle.</p> <p>Primary research is also undertaken: a survey of customers or retailers to understand what changes would be desirable; similarly, research showing the steps that some large retailers have taken to mitigate their impacts.</p> <p>Potential supporting project areas could include: clothing rental and second-hand markets; recycling and upcycling initiatives; supply chain sustainability; consumer education and awareness policy; industry collaboration.</p>
Physics	<p>Topic: The relationship between exit velocity and the speed of the top surface of water</p> <p>Research question: Neglecting friction, how does the exit velocity, V, relate to the speed of the top surface of the water, v, at distance, h, above the opening?</p>	<p>This essay is based on primary data.</p> <p>It is an opportunity for you to look at this event holistically, applying fundamental principles of fluid dynamics.</p> <p>The set-up must allow constant measurement of two speeds during flow time.</p>
	<p>Topic: Estimating the mass of Saturn</p> <p>Research question: From data related to Saturn's satellites and rings, what is the best estimate of Saturn's mass?</p>	<p>This essay is based on secondary data.</p> <p>You would need to consider a number of satellites, near and far. Also, investigate the nature of the rings, what information is required and how it can be obtained.</p>

Subject	Topic and research question	Outline of approach
Sports, exercise and health science	<p>Topic: The effect of a high-intensity interval training (HIIT) programme on cardiovascular endurance</p> <p>Research question: Does a six-week HIIT programme provide significantly enhanced cardiovascular endurance?</p>	<p>This essay is based on primary research. It will involve experimental design, with participants randomized into intervention and control groups.</p>
	<p>Topic: The impact of exercise on symptoms of depression</p> <p>Research question: Does exercise meaningfully reduce depressive symptoms?</p>	<p>This essay is based on secondary research.</p> <p>A systematic review is undertaken to identify relevant research articles, from which findings are presented and a conclusion is reached.</p>

Researching and writing the essay

The first step is the carrying out of background research. This applies to essays based only on secondary data, and to those that use primary and secondary data. Before you delve into peer-reviewed scientific publications, ensure that you understand fully the theories and concepts associated with your topic. They must be linked to the topic and research question and support the argument. For secondary data, the selection criteria for the material to be included should be made explicit in the essay.

A focused research question will enable you to sustain an argument throughout the essay. The question will define the structure of your essay, the methodology based on scientific principles, and the terminology. It will support an analytical, data-based or data-driven discussion. The sources must support the introduction of the topic and be used to support and give context to the analysis and the discussion. Variables in the research question must be defined and justified, and allow measurements to be made in the investigation. The International System of Units (SI) must be used.

The methodology must be detailed so that the investigation can be replicated. The methodology must support measuring the dependent variables under standardized conditions.

The results must be presented in a standardized format. They must be clearly labelled with appropriate headings, units and numbering. Essays based on secondary data may copy graphs or tables from the selected sources, but the (statistical) analysis must be performed by you, the student.

The conclusions must be supported by the data. However, do not be concerned if the collected data does not support your hypothesis; “negative” results are just as valid as “positive” results in relation to the critical evaluation of the results and conclusions in the context of the research question.

The evaluation must be linked to the research question and the methodology. It must show the strengths and weaknesses of the essay, preferably in a scientific context, and must also include the sources.

Considering the assessment criteria

Make sure you use the extended essay assessment criteria to remind yourself of the expected elements of the extended essay. Each of the five criteria (A–E) is accompanied by a guiding question that should be applied to the context of the sciences. In this way, you can see how the assessment criteria relate to your own essay. It is important that you also refer to the “[Generic guidance for the extended essay](#)” section in this guide for a broader spectrum of advice on using the assessment criteria to inform your writing.

A: Framework for the essay	<p>The research question will decide the research methods, which then need to yield appropriately scientific data that supports a logical response to it. A focused question encourages strong data analysis and critical evaluation of findings.</p> <p>For sciences extended essays where the research is conducted in universities or other external organizations, ensure that the methods</p>
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	<p>used are your own and not just those established by the organization.</p> <p>Structural conventions: essays in the sciences often include more data than other subjects, so make sure that data tables, diagrams and graphs can be clearly understood and are appropriately labelled, and that all data is clearly processed. Examples of calculations should include mathematical uncertainties on the measurements collected.</p>
B: Knowledge and understanding	<p>Knowledge and understanding must be demonstrated by exploring and discussing the underlying processes and theories, using clear and well-explained terminology. This is especially critical in essays based on secondary data. For example, when investigating the turnover rate of an enzyme, it is essential to discuss enzyme kinetics.</p>
C: Analysis and line of argument	<p>Analysis must follow standard processes, including qualitative and quantitative approaches and statistical methods where appropriate, and may include mathematical transformation. The analysis should be done in such a way as to address the research question directly.</p> <p>Analysis of secondary data must be your own.</p> <p>A clear line of argument should be maintained throughout and all elements of your sciences extended essay should be linked; only then is it effective in communicating your message. For example, if the topic is about the kinetics of photosynthesis, then discussion of the morphology of plant leaves is not relevant.</p> <p>If the research question is not fully answered, you should state unresolved issues, account for these and suggest improvements.</p>
D: Discussion and evaluation	<p>The discussion should be critical, have a scientific context and must always be linked to the research question. Ensure that discussions use the sources to support conclusions.</p> <p>The conclusion should not be a repetition of results but a supported, well-explained synthesis of them.</p> <p>The evaluation of your essay should indicate any unresolved issues, accounting for these and suggesting improvements, and should be linked to the findings and the research question.</p>
E: Reflection	<p>Refer to the “Generic guidance for the extended essay” and the “Reflection and the extended essay” sections of this guide.</p>

Mathematics

Note: Before reading the following guidance, read the “[Generic guidance for the extended essay](#)” section in this guide.

What is distinctive about an extended essay in mathematics?

An extended essay in mathematics should generally take one of the following approaches.

- Explore an issue in mathematics of interest to you that is outside of the syllabus. Sometimes in the course of your studies or in your wider reading, your curiosity might be aroused by a problem in mathematics or a different approach to mathematics that you might be interested to explore: see examples 1, 2 and 3 under “Example topics, research questions and approaches” below. These could be called **theoretical** essays.

- You might learn of how mathematics can be used to investigate an issue you are interested in. This issue could come from your career aspirations, a creativity, activity, service (CAS) project, an interest or hobby of yours, or from another subject. If the issue arises from another subject, you could consider the interdisciplinary pathway for your extended essay: see examples 4 and 5 under “Example topics, research questions and approaches” below. These could be called **practical** essays.
- You might have a passion for a sport or an interest from which you can get some data. Choose a mathematics extended essay and analyse the data, probably using your knowledge of statistics, to answer your research question. If the topic is something you love, you will especially enjoy writing your extended essay: see example 6 under “Example topics, research questions and approaches” below.

Note that your essay does not have to be entirely practical or theoretical. Many essays will be a mixture of both. In any case, note that it is mandatory to include secondary research, i.e. a review of the literature.

Remember that mathematics uses a lot of algebra, so the actual final word count for your extended essay is likely to fall short of 4,000 words.

Choosing a topic

The extended essay is your opportunity to explore an area of personal interest. If this interest is a branch of mathematics or if you plan to use mathematics to explore an interest, then your next task is to narrow this down to a topic. In more theoretical essays, the topic could clearly demonstrate the area of mathematics you will be exploring. In more practical essays, the topic could indicate how mathematics can be used to explore your area of interest. Once you choose your topic of interest, provided it is narrow and sufficiently focused, you should be able to come up with a provisional research question. As your research proceeds, you may decide that the exact wording of the research question needs to change a little to adapt to the direction your research is taking.

Be careful with research questions that compare two different approaches to a topic. It can sometimes be difficult to show a full understanding of the mathematics behind both. For instance, example 1 under “Examples of topics, research questions and approaches” below would be better than “Compare RSA with elliptic curves as a method of encryption”. You would need to explain carefully the mathematics behind both RSA and elliptic curves: this will not be fully achievable within 4,000 words. Avoid taking on too much and sacrificing showing a clear understanding of the mathematics in trying to fit it all in.

Example topics, research questions and approaches

Topic	Research question	Outline of approach
Mainly theoretical essays		
1. Cryptography	What is RSA (Rivest–Shamir–Adleman) encryption and how does it help make the internet secure?	Explain carefully how RSA works, making sure you show a full understanding of any mathematics used that is beyond the syllabus. Explain how this is used to make online transactions secure.
2. To infinity and beyond	How many infinities are there?	Explore countably infinite sets, explaining concepts clearly and proving your ideas. Progress to the uncountable continuum and discuss how this might be extended further.
3. Fractal dimension	What are fractals and what is fractal dimension? or Length of a coastline	Explain how fractals develop and explain their importance, perhaps exploring some limits problems such as finite area and infinite perimeter. From here, you could progress to the length of the

Topic	Research question	Outline of approach
		coastline of a favourite island or to the idea of fractal dimension.
Mainly practical essays		
4. The last rhinoceros	How long do the rhinos have left?	Explore both the population size and the habitat of the rhinoceros. Can you come up with a realistic model for the population size or the habitat area? According to the model, which will reach zero first, population or habitat?
5. Getting to school by public transport	What is the quickest and/or cheapest route from your home to school?	Consider the transport system in your area and compare different ways of getting to school. Estimate travel and walking times; consider an algorithm such as Dijkstra and decide on your preferred route.
6. Winning the English football Premier League	What is "home advantage", and are Premier League football champions equally successful away from home?	Use raw data from the English Premier League football results to examine the distribution of goals scored at home and away. Is there a significant home advantage? Are the champions able to overcome this in their away games?

Researching and writing the essay

Before you begin writing your essay, you will need to do some research. In more theoretical essays, this research will mainly involve reading around the subject. Try to choose a few resources that are most relevant; too many sources can be confusing. Depending on the mathematics you want to explore, the use of subheadings in your extended essay may be helpful.

In your introduction, explain your research question clearly and what you plan to do, in your own words. It is important that you show understanding of the mathematics you will be using and that you start from what is familiar to you in the syllabus. If you do not fully understand it, leave it out and amend your plan. When you write about the mathematics, all essential steps need to be shown and explained in your own words. Do not rely too heavily on your sources and do not copy information directly from them. It must be clear to the reader that you fully understand what you are doing. If there is a complicated theorem you want to use, and you feel the proof is too difficult, it is acceptable to quote the theorem without proving it. But it is essential that you explain what it is for and give an illustrative example to show your understanding.

In more practical essays, the emphasis may be on collecting appropriate data to begin with. When writing your essay, after explaining the background, show the data first (in an appendix if there is a large amount). For examples 4 and 6 above, you would need to start by graphing the data before deciding what to do with it. For this reason, it is better not to specify the mathematics or statistical methods you use in the research question because this may change once you examine your data. Your research then may involve learning (and explaining) some new mathematics to help you analyse the data. However, note that using mathematics from outside the syllabus is not essential. You may be able to answer your research question using the mathematics you have covered in your syllabus.

Do make sure you use raw data. It is difficult to do much with data that has already been processed, for example, batting averages in baseball.

Considering the assessment criteria

Make sure you use the extended essay assessment criteria to remind yourself of the expected elements of the extended essay. Each of the five criteria (A–E) is accompanied by a guiding question that should be applied to the context of mathematics. In this way, you can see how the assessment criteria relate to your own essay. It is important that you also refer to the “[Generic guidance for the extended essay](#)” section in this guide for a broader spectrum of advice on using the assessment criteria to inform your writing.

A: Framework for the essay	Clearly state your research question and ensure your essay remains focused on it throughout. Make sure your mathematics is written well by using an equation editor. This will help you avoid poor mathematical presentation, such as not using a new line for each step in your algebra, or using inappropriate symbols like * for multiplication and ^ for powers.
B: Knowledge and understanding	Showing your knowledge and clear understanding of the mathematics you use is arguably the most important criterion in a mathematics essay. If you have not shown that you really understand the mathematics, this will impact other criteria. Do not be overly ambitious—an extended essay is not a research paper revealing that you have discovered something profound and new. Understand and explain something that is new to you (in more theoretical essays) or apply some mathematics that you understand well in a situation that is new (in more practical essays).
C: Analysis and line of argument	Avoid the temptation to extend your analysis beyond the realm of your research question—this is likely to lessen the impact of your essay. In more practical essays, it is better that the techniques you use to analyse your data are decided based on looking at that data, rather than being predetermined. In more theoretical essays, make sure that the mathematical theory described, and the illustrative examples used, remain focused on the research question. This will result in a consistent line of argument.
D: Discussion and evaluation	Clearly discuss the relevance of your findings throughout the essay, not just in the conclusion. Consider the strengths of what you have found and describe any limitations. In more practical essays, discuss the findings from your data and ensure this informs how you proceed through the essay. In more theoretical essays, explain how the theory you are developing is relevant to your research question. In both cases, ensure that the conclusions you reach are relevant to your research question and are supported by findings in your essay.
E: Reflection	Refer to the “ Generic guidance for the extended essay ” and the “ Reflection and the extended essay ” sections of this guide.

Arts

Note: Before reading the following guidance, read the “[Generic guidance for the extended essay](#)” section in this guide.

What is distinctive about an extended essay in the arts?

An extended essay in the arts allows you to explore a topic of particular interest to you in dance, film, music, theatre or visual arts. It can include a wide range of dynamic creative practices through which human beings convey ideas, communicate experiences, values and impressions, and develop identity. Any essay in this area should integrate the analysis of primary sources—such as artworks, films, live performances, music concerts, play texts, screenplays, scripts and scores—with disciplined research informed by scholarly

methods, and provide a critical evaluation of the results. Secondary sources, such as books, critiques and magazine articles, interviews, subject journals and websites, must be used as evidential support for your argument.

Ensure that your selection of primary sources—your body of work—is robust enough to sustain an in-depth 4,000-word essay. There is no precise number of sources that will work best, but remember that the sources should enable you to consider not only what they say but also how they say it. The sources should contain enough substance that you can continue to raise and discuss points without overanalysing them or repeating yourself. Determining the best number of sources for your essay will take some effort; rather than focusing on the amount, you might look for complementary sources first—for example, three to four by the same author, artist, musician. As you begin to analyse them, you may realize that three sources yield enough material for effective comparison and contrast; you may also realize that four sources enable you to deepen your analysis.

Each subject poses its own unique set of challenges. Therefore, the approach to the investigation should reflect the research methods most appropriate to the arts subject and topic being studied. These approaches could include the study of aesthetic concepts, historical, social and cultural aspects, and gender-based or post-colonialist readings. In the arts, qualitative research methods that seek to understand the chosen art form within a context are more likely to be used.

Your extended essay presents an opportunity to study art in an international context, broadening your horizons in terms of artistic culture and exploring both the familiar and the new, in the spirit of intercultural understanding.

Choosing a topic

The arts present strong links to other disciplines, and their richness may tempt students to select topics that are peripheral to the actual arts subject—this is not recommended. It is essential that students answer the question using artistic and contextual analysis and that the work does not diverge into other areas like psychology, history or sociology. To illustrate this, consider a music research question: “How did the Beatles change the music industry in the 1960s?” While the Beatles are musicians, the focus of the research question is the “changes in the music industry”. Therefore, the focus is not on music but on the industry that relates to it.

Students may choose to discuss, for example, a social, political or gender issue arising from an artwork, film or play text. Nevertheless, they must not treat artwork merely as documentary evidence in the discussion of the issue and should focus instead on the artistic meaning and significance of the chosen artwork.

Some topics may attempt to demonstrate the influence of one artist, performer or composer over another or one artistic style over another, but undertaking a comparative essay like this should be considered carefully. While finding similarities between the work of artists is relatively easy, demonstrating an actual influence is complex. For this approach to be successful, a student would need to undertake a rigorous formal analysis and provide supporting documents, such as letters, diaries or interviews, or media articles, to evidence the perceived “influence” clearly. The visual arts example below that explores the influence of Japanese prints on Claude Monet’s artistic practice describes a good approach to such a topic.

Example topics, research questions and approaches

Subject	Topic and research question	Outline of approach
Dance	<p>Topic: Voguing as a response to the rejection of the LGBTQ+ community</p> <p>Research question: To what extent was voguing a response to the rejection of the LGBTQ+ community and what is its relevance today?</p>	<p>Identify the historical and cultural time and spaces since the late 1800s in which the LGBTQ+ communities were visible and celebrated and additionally faced many barriers.</p> <p>Identify and select appropriate sources for the development of an argument.</p>

Subject	Topic and research question	Outline of approach
		<p>Explore the origin of, and reason for, the creation of voguing by Black and Latino LGBTQ+ communities at that time.</p> <p>Identify leaders and their contributions to the form.</p> <p>Discuss the relevance of voguing inception and why it is important today.</p> <p>Evaluate strengths and limitations of the research.</p> <p>Come to conclusions addressing the research question.</p>
	<p>Topic: Gender roles in post-war Germany reflected in the choreography of Pina Bausch</p> <p>Research question: To what extent does Pina Bausch reflect on societal issues relating to gender roles in post-war Germany through her choreography?</p>	<p>With the help of secondary sources, research the life and work of Pina Bausch and identify the historical and cultural influences on her work.</p> <p>Select specific examples and sources that support Bausch's work and identify the societal issues relating to gender roles in her choreography.</p> <p>Describe and evaluate how successful Bausch's works have been, supporting themes with programme notes, archival materials and critics' writings.</p> <p>Evaluate the strengths and limitations of the research.</p> <p>Come to conclusions addressing the research question.</p>
Film	<p>Topic: The influence of Italian Neorealist films on the French New Wave</p> <p>Research question: How did Italian Neorealist films like Vittorio De Sica's <i>Bicycle Thieves</i> (1948) influence later directors and movements such as Francois Truffaut and the French New Wave?</p>	<p>With the help of secondary resources, research the characteristics of Italian Neorealist films and the French New Wave.</p> <p>Analyse the directing style, production methods and representation of adolescence in <i>Bicycle Thieves</i> (1948) and <i>The 400 Blows</i> (1959). A possible third film, with a contrasting style but influential to <i>The 400 Blows</i>, could be <i>Rebel Without a Cause</i> (1955).</p> <p>Find evidence to support the claim that Italian Neorealist films had an influence on the later French New Wave. Discuss and evaluate this evidence.</p> <p>Evaluate the strengths and limitations of the research.</p> <p>Come to conclusions addressing the research question.</p>

Subject	Topic and research question	Outline of approach
	<p>Topic: Changing treatment of male and female characters in different versions of films</p> <p>Research question: How do different versions of <i>Beauty and the Beast</i> reveal changing attitudes in filmmakers' treatment of male and female characters in light of gender film theory?</p>	<p>Select different versions of <i>Beauty and the Beast</i>. These could be <i>La Belle et la Bête</i> (1946) and <i>Beauty and the Beast</i> (2017). A third film could be the animated <i>Beauty and the Beast</i> (1991).</p> <p>Analyse the changing representation of men and women in terms of gender theory, the male gaze, and society in the selected films.</p> <p>Evaluate the attitudes of the filmmakers in the treatment of male and female characters.</p> <p>Illustrate your points.</p> <p>Establish conclusions and evaluate the strengths and limitations of the research.</p>
Music	<p>Topic: Eastern European folk elements in Bartók's music</p> <p>Research question: How are the Eastern European folk elements that Bartók introduced in his <i>Concerto for Orchestra</i> developed?</p>	<p>With the help of secondary sources, research the characteristics of Eastern European folk music.</p> <p>Find examples to illustrate these characteristics.</p> <p>Identify Eastern European folk elements in Bartók's composition.</p> <p>Analyse how Bartók develops these elements throughout the piece.</p> <p>Find examples to illustrate your points.</p> <p>Evaluate the strengths and limitations of the research.</p> <p>Establish conclusions addressing the research question.</p>
	<p>Topic: The different classifications of Baroque concertos</p> <p>Research question: To what extent do structural differences justify the classification of a Vivaldi Baroque era concerto as "Italian School" and a Bach Baroque era concerto as "German School"?</p>	<p>Research the concepts of the Italian Baroque concerto and German Baroque concerto.</p> <p>Select solo concertos by Bach and Vivaldi and justify your selection.</p> <p>Analyse the concertos' structure.</p> <p>Compare and contrast their elements.</p> <p>Provide examples and evidence to support your claims.</p> <p>Evaluate the strengths and limitations of the research.</p> <p>Draw a conclusion(s) responding to the research question.</p>
Theatre	<p>Topic: The use of costume designs to visually echo themes in theatrical productions</p> <p>Research question: To what extent do Sara Schwartz's costume designs visually</p>	<p>Research the themes explored in <i>Leonce and Lena</i>, as declared by the director, such as loss of power, beauty, existentialism and self-sacrifice, through the lens of costume design.</p>

Subject	Topic and research question	Outline of approach
	<p>echo the themes explored in the production of <i>Leonce and Lena</i> at the Volkstheater in Vienna, Austria?</p> <p>Topic: The use of the body in physical theatre</p> <p>Research question: To what extent can social discrimination be explored through the body in physical theatre? An analysis of DV8's <i>The Cost of Living</i>.</p>	<p>Analyse the performance of <i>Leonce and Lena</i> produced at the Volkstheater in 2010.</p> <p>Supported by personal interviews, draw close links to the text by Büchner and to Schwartz's designs.</p> <p>Provide examples and evidence to support your claims.</p> <p>Evaluate the strengths and limitations of the research.</p> <p>Draw conclusions addressing the research question.</p> <p>Research secondary sources on physical theatre that may range from the general, e.g. the moving body, to the specific, e.g. Lloyd Newson and DV8's own writings.</p> <p>Analyse the performance of <i>The Cost of Living</i>, first identifying the physical metaphors of the broken body and whole body, then linking this to physical characterization techniques.</p> <p>Compare spoken and physical language and their interplay in this production to convey the intended message about physical disability.</p> <p>Provide examples and evidence to support your claims.</p> <p>Evaluate the strengths and limitations of the research.</p> <p>Establish conclusions, evaluating to what extent social discrimination can be explored through the body in physical theatre.</p>
Visual arts	<p>Topic: The influence of Japanese prints on Claude Monet's artistic practice</p> <p>Research question: To what extent did aesthetic principles of Japanese prints from the Edo period influence Claude Monet's material and conceptual artistic practice?</p>	<p>Research the characteristics of Japanese prints from the Edo period and Impressionist paintings.</p> <p>Analyse a selection of Monet's artworks, from sequential periods in his life, to study the conceptual and material development of his artworks in terms of the possible influence of aesthetic principles of Japanese prints from the Edo period.</p> <p>Research secondary sources focused on finding evidence to support such influence.</p> <p>Provide examples to support your claims.</p>

Subject	Topic and research question	Outline of approach
		<p>Evaluate the strengths and limitations of the research.</p> <p>Draw conclusions addressing the extent of the influence.</p>
	<p>Topic: The embodiment of the cyclical nature of life and death in work by Joni Brenner</p> <p>Research question: To what extent does the <i>Skull Series</i> of compositions by Joni Brenner embody the cyclical nature of life and death?</p>	<p>Research the socio-historical context of Apartheid in South Africa and the art produced post-Apartheid. This will help situate the topic within a wider context, providing a better understanding of Brenner's ideas and the subjects depicted.</p> <p>Analyse the artistic and symbolic aspects of the <i>Skull Series</i> compositions.</p> <p>Evaluate the extent to which the cycle of life and death is embodied in the artworks.</p> <p>Illustrate your points.</p> <p>Evaluate the strengths and limitations of the research.</p> <p>Establish conclusions addressing the extent of the embodiment of life and death in the artworks.</p>

Researching and writing the essay

To substantiate ideas in the arts, you must critically examine primary and secondary sources. In instances where you are unable to view primary sources in person—such as paintings, performances, concerts, buildings—you must rely on high-quality reproductions, videos and images instead. Images must be used selectively to support the reading and understanding of your essay.

Secondary sources can be used to provide context. They support the points raised in the analysis and illuminate the circumstances that led the artist to make certain artistic decisions. The opinions of specialists, practitioners and professionals, such as artists, curators, historians and critics, may provide different perspectives that will help create a robust line of argument.

When building a compelling academic argument, it is important to select an appropriate strategy. Quoting or summarizing secondary sources is likely to result in limited argumentation. Making use of a good selection of analysed and explained primary sources would be more effective. Ideally, a combination of both helps to develop a more convincing and solid argument.

Considering the assessment criteria

Make sure you use the extended essay assessment criteria to remind yourself of the expected elements of the extended essay. Each of the five criteria (A–E) is accompanied by a guiding question that should be applied to the context of the arts. In this way, you can see how the assessment criteria relate to your own essay. It is important that you also refer to the “[Generic guidance for the extended essay](#)” section in this guide for a broader spectrum of advice on using the assessment criteria to inform your writing.

A: Framework for the essay

You should review the existing literature on your topic to inform the construction of your research question and evaluate its relevance. It is recommended that you carefully select a limited number of works (e.g. artworks, performances, play scripts) to support in-depth analysis and discussion within the word limit.

	<p>The use of images is mandatory in visual arts essays, and they must appear in the body of the essay.</p> <p>It is recommended that essays in other arts subjects include carefully selected visuals—such as screen captures from films, diagrams, scores or set designs—to illustrate and support the developing argument. All such images must be properly identified and cited in the essay, and in a separate list of sources at the end of the essay. All images used must be of a reasonable size and high-quality resolution.</p>
B: Knowledge and understanding	You should use artistic terminology and concepts fluently and accurately. You should demonstrate knowledge and understanding of artistic periods, movements and styles when necessary. Your essay needs to show clear evidence of knowledge and understanding for at least one appropriate context that addresses the topic in a meaningful way.
C: Analysis and line of argument	<p>While there are different ways of approaching an argumentative thread, in the arts it is important to illustrate the points made using examples from the works examined.</p> <p>Another way of constructing a line of argument could be through comparisons of, for example, two or more dance productions, artworks or music scores. However, you should ensure that your comparisons are valid, that they are the product of sensitive and objective analysis, and that the point of making a comparison is clearly explained and significant.</p>
D: Discussion and evaluation	<p>Your response to your research question should direct the reader to evidence, both in the work(s) studied and in the secondary research. It should do this in a balanced manner, considering a range of possible ideas and arguments.</p> <p>You should identify the strengths and limitations of the research in your arts-focused topic and how important these have been in the interpretation of the findings and development of your conclusions.</p>
E: Reflection	Refer to the “ Generic guidance for the extended essay ” and the “ Reflection and the extended essay ” sections of this guide.

Cross-disciplinary subjects

Note: Before reading the following guidance, read the “[Generic guidance for the extended essay](#)” section in this guide.

What is distinctive about an extended essay in cross-disciplinary subjects?

Separately from the interdisciplinary pathway, you can do a subject-focused extended essay in one of the two DP subjects that are cross-disciplinary: ESS and literature and performance.

The transdisciplinary lens of ESS brings together two subject groups: individuals and societies and the sciences. Meanwhile, literature and performance combines studies in language and literature and the arts.

Note: ESS or literature and performance may not be used in combination with another DP subject in the interdisciplinary pathway. This is to avoid the complexity and potential challenges of integrating more than two disciplinary perspectives.

An extended essay in either of these cross-disciplinary subjects will allow you to address a topic of your interest, drawing from the interactions between approaches, theories, concepts and methodologies of their disciplines.

In ESS, your extended essay will combine the knowledge and techniques associated with sciences and humanities, giving you an opportunity to research an environmental topic you want to engage with. You will approach the topic by considering the interrelationships between environmental systems and societies holistically.

A literature and performance extended essay combines an exploration of dual elements: first a written text, then its adaptation to a performance. Your essay, therefore, should be grounded in and begin with the study of a text. It should then explore in detail its transformation and/or adaptation into a realized performance.

Choosing a topic

Extended essays in ESS and literature and performance can cover a wide variety of topics. What will ground these topics effectively in one of these diverse subjects is the approach. It is not just a matter of content but also the theoretical, conceptual and methodological toolkits of the disciplines in each subject, which will provide insights and allow you to develop well-constructed arguments.

A topic in ESS needs to focus on the interaction and integration of “natural” environmental systems and human societies. Your research topic will focus on an environmental issue coupled with a societal viewpoint, intertwined to help understand the environment and its sustainability. This will allow you to explore how environmental systems and societies function together.

Essays in literature and performance must examine both a written piece and a performance of that text. Novels, poems and prose types other than fiction can be appropriate material for adaptation. Performed elements can take such forms as theatre, film, opera, dance, or digital creations such as video games. Historical, geographic, linguistic, ethnic and socioeconomic circumstances will provide the necessary contexts.

Be aware that a literature and performance extended essay is not an appropriate vehicle for your own original transformation of a text.

Example topics, research questions and approaches

Subject	Topic and research question	Outline of approach
Environmental systems and societies	<p>Topic: Climate change and the California almond industry</p> <p>Research question: To what extent is the California almond industry vulnerable to the impacts of climate change?</p>	<p>A detailed analysis of secondary data on temperature, precipitation, diseases and productivity.</p> <p>The essay evaluates the impact of climate change on the almond industry in California.</p>
	<p>Topic: Effects of ethnicity and socioeconomic status in the generation of household food waste</p> <p>Research question: To what extent does income and ethnicity influence purchase habits, and hence food waste generation, among adults in Hong Kong?</p>	<p>Primary data is collected through an online questionnaire.</p> <p>Research is analysed and compared with secondary sources such as scientific journals and government publications.</p> <p>The essay evaluates the relevance of income and ethnicity on consumption and consequent waste for adults in Hong Kong.</p>
Literature and performance	<p>Topic: Sherlock Holmes and Watson as they are depicted in the television production <i>Elementary</i></p>	<p>You will need to consider Conan Doyle’s approach to the relationship between Holmes and Watson, exploring some of the</p>

Subject	Topic and research question	Outline of approach
	<p>Research question: How have the changes in Watson in the television production <i>Elementary</i> affected the portrayal of both Holmes and Watson?</p>	<p>critical work that has been written on this aspect of the original fiction.</p> <p>The treatment of the relationship in <i>Elementary</i> will then need to be analysed, e.g. the quality of this new dynamic, critiquing how it affects the partnership.</p>
	<p>Topic: Jerome Robbins' choreography of <i>West Side Story</i>, and of William Shakespeare's <i>Romeo and Juliet</i></p> <p>Research question: How does Jerome Robbins' choreography of <i>West Side Story</i> transform the original meaning and effect of Shakespeare's <i>Romeo and Juliet</i>?</p>	<p>You will need to identify some central aspects of Shakespeare's play and point out their presence in <i>West Side Story</i>.</p> <p>Then the choreography will need to be closely examined to discern and evaluate how dance has been used to transform and heighten the meanings and emotional effects of the original play.</p>

Researching and writing the essay

Although all extended essays must include a literature review as a first step, cross-disciplinary subjects require different types of sources from which to gather information and construct your line of argument. It is important that you understand what constitutes an appropriate primary or secondary source in your chosen subject, as well as which methods are suitable.

Your extended essay in ESS is an opportunity to carry out hands-on work in the laboratory or in the field to develop a sound understanding of the interrelationships between environmental systems and societies. A systems approach is particularly effective for your analysis and interpretation of data. Some research topics are better studied with a combination of primary and secondary data collection, but your essay could be based on secondary data only.

In a literature and performance extended essay, you must offer a balanced comparison of your chosen text and its performance, analysing and evaluating their salient features within the context of their creation to develop a line of argument. Your essay needs to include the use of the appropriate critical terms for each form and provide a clearly structured integration of the originating text and its adaptation.

In a successful cross-disciplinary subject essay, your line of argument reflects the logic of the relevant disciplines combined in that subject, uses specific terminology and follows pertinent structural conventions. It is important that you refer to the ESS or literature and performance subject guides to make sure you are using sources, methods, approaches and research strategies appropriately.

Considering the assessment criteria

Make sure you use the extended essay assessment criteria to remind yourself of the expected elements of the extended essay. Each of the five criteria (A–E) is accompanied by a guiding question that should be applied to the context of a cross-disciplinary subject. In this way, you can see how the assessment criteria relate to your own essay. It is important that you also refer to the “[Generic guidance for the extended essay](#)” section in this guide for a broader spectrum of advice on using the assessment criteria to inform your writing.

A: Framework for the essay	Your research question should reflect the cross-disciplinary nature of either ESS or literature and performance.
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	<p>Your selection of research methods should be informed by the approaches evident in the ESS or literature and performance subject guides.</p> <p>The structural conventions for the cross-disciplinary subject you have chosen will be derived from the disciplines it combines; it may also be worthwhile reading the corresponding sections of the subject-specific guidance.</p>
B: Knowledge and understanding	Remember that you are observing your topic through the combined lenses that operate within your cross-disciplinary subject. You will be demonstrating knowledge and understanding when you integrate their terminology and concepts effectively into your writing.
C: Analysis and line of argument	Your analysis should produce findings that emphasize and endorse the cross-disciplinary approach that either literature and performance or ESS takes. When you can weave together those findings and synthesize conclusions that answer your research question, you are on your way towards producing a strong line of argument.
D: Discussion and evaluation	<p>Discussion is the key tool that allows you to apply the cross-disciplinary context of either literature and performance or ESS to highlight and balance significant aspects of your findings.</p> <p>Evaluation of the effectiveness of your essay can include appraising the worth of investigating your topic through the lens of this cross-disciplinary subject. How has this deepened, or even changed, your initial ideas about the topic?</p>
E: Reflection	Refer to the “ Generic guidance for the extended essay ” and the “ Reflection and the extended essay ” sections of this guide.

The researching and writing process

The table below outlines the research and writing process that is so central to your extended essay experience. However, this process may unfold in slightly different ways or with a different order of events. Nonetheless, an understanding of its essential elements will continue to be useful long after your extended essay has been completed.

<p>Decide on the broad topic area to research</p>	<ul style="list-style-type: none"> • Choose a broad topic area of personal interest. • Decide on a suitable pathway: subject-focused or interdisciplinary. • Connect a Diploma Programme (DP) subject or subjects to the topic area. • If appropriate, refer to the suggested interdisciplinary frameworks to help shape the inquiry. • Read relevant sections of this guide, including the generic and subject-specific or interdisciplinary guidance, assessment criteria and relevant policies, e.g. ethical guidelines.
<p>Develop a topic of personal interest</p>	<ul style="list-style-type: none"> • Narrow the topic to become focused and achievable in 4,000 words. • Reflect on what is known or needs to be known. • Develop any subtopics in a logical order so that your research will unfold in a coherent way.
<p>Preliminary investigation</p>	<ul style="list-style-type: none"> • Remember that the topic and research question can only make sense when placed within a disciplinary or interdisciplinary context. • Do a preliminary review of the literature. • Do other preliminary research, e.g. online. • Consult with experts in the subject area(s).
<p>Construct a research question</p>	<ul style="list-style-type: none"> • Ensure that the research question is focused. • Choose a higher-order question—this will lead to analysis rather than description. • Make the question inspiring and motivational for you. • Be prepared to amend or change the question: as you move forward with your research, continually refer back to your research question to establish whether it needs adjustment.
<p>Plan the research</p>	<ul style="list-style-type: none"> • Set up a researcher’s reflection space (RRS) and use it as a planning and reflection tool. • Develop a timeline for the extended essay process, including school deadlines and the three mandatory reflection sessions with your supervisor. • Decide on the research methods that best support a response to the research question, bearing in mind the nature of the DP subject(s) involved.
<p>Apply the research methods</p>	<ul style="list-style-type: none"> • Gather information using your chosen research methods. • Balance the use of primary and secondary sources. • Carry out your research ethically and strive for academic integrity.

Compile and organize information	<ul style="list-style-type: none"> • Sort, filter and organize information and data into manageable amounts. • Set aside peripheral material but keep it in mind in case the research question changes.
Analyse, interpret, evaluate and synthesize the findings	<ul style="list-style-type: none"> • Always refer back to the research question. • Analyse information from secondary sources. • Interpret and analyse data from primary research (if those were used). • Organize, combine, link and synthesize information to form the body of the essay. • Ensure that your line of argument is supported by evidence from the research.
Write the conclusion	<ul style="list-style-type: none"> • Ensure that the conclusion relates to the research question and is logically linked to your line of argument in the body of the essay. • Synthesize rather than merely summarize. • Consider broader issues; if appropriate, suggest other questions to research but do not introduce new ideas.
Review and edit the final essay	<ul style="list-style-type: none"> • Edit and re-edit your essay if needed. • Feel confident that the essay “flows”: arguments make sense, conclusions are well founded and the research question has been successfully addressed. • Ensure that the essay aligns with any structural conventions relevant to the subject areas you are working in. • Ensure that citation and referencing are complete and accurate.

Support while researching and writing

The expectation and requirements are that an extended essay is the product of your self-regulated work. Yet it is also true that your development as an independent researcher and writer is supported along the way by others: your supervisor, your extended essay coordinator, other teachers, your peers, your family. Your extended essay supervisor is your primary support person, so it is important that you understand what you can expect from your supervisor and what your supervisor can expect from you (see figure 11).

Figure 11
Expectations of students and supervisors



Researching the extended essay

Getting started

This is the key stage when you identify an engaging topic, connected with your DP studies, that will hold your interest and keep you motivated. It is worthwhile spending time and effort finding out what that topic might be. Figure 12 illustrates a useful approach you can follow.

Figure 12
Getting started



Developing a research question: Four steps

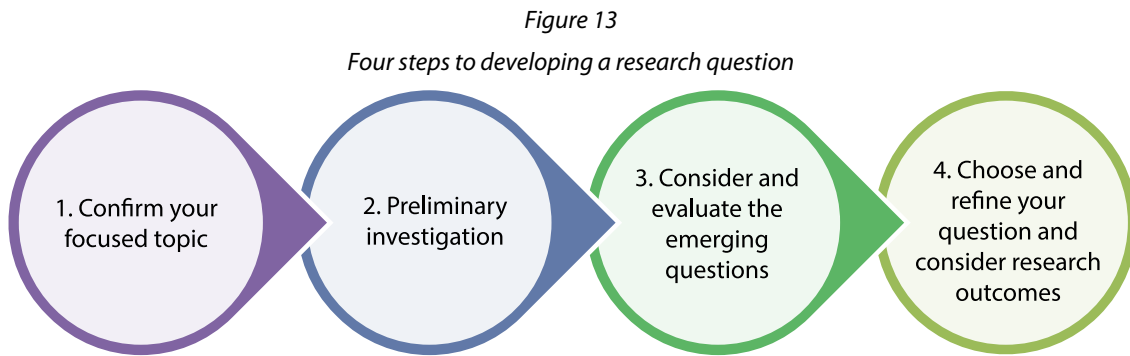
Regardless of the extended essay pathway you take, you must frame your research question as a question, not a hypothesis or a statement of intent. The reason for this is that a question helps you to retain focus throughout the entire extended essay process.

Your research question needs to:

- be clearly stated and focused
- be open to amendment or change if your research takes you in a different direction or if it turns out there are insufficient resources to help you carry out an adequate amount of research
- invite a critical examination of the topic with respect to the knowledge, concepts, theories, perspectives, methods, or a combination of these, of your chosen DP subject(s)
- encourage analysis, evaluation and synthesis, rather than description, unsupported generalizations and value judgements.

A research question helps you to focus your research and is the starting point for the development of your fundamental line of argument as you write your essay. It will help to keep you within the scope of the 4,000 words you are permitted for this academic essay. It will also help you to avoid producing an unfocused, mostly descriptive piece of writing.

You can develop your research question in different ways; figure 13 shows a model that you may find useful; it follows on from figure 12.



Confirm your focused topic

Deciding on a DP subject(s)-related topic that is of personal interest will keep you engaged and motivated throughout the process. Following the “Getting started” framework in figure 12 should put you in a good position to narrow down and confirm your focused topic.

Preliminary investigation

Do some preliminary investigation on your now focused topic. Ask yourself the following questions.

- What has already been written about this topic?
- Is it easy to find sources of information?
- Is there a range of different resources available?
- Is there a range of views or perspectives on the topic?
- What interesting questions have started to emerge from my reading on the topic?

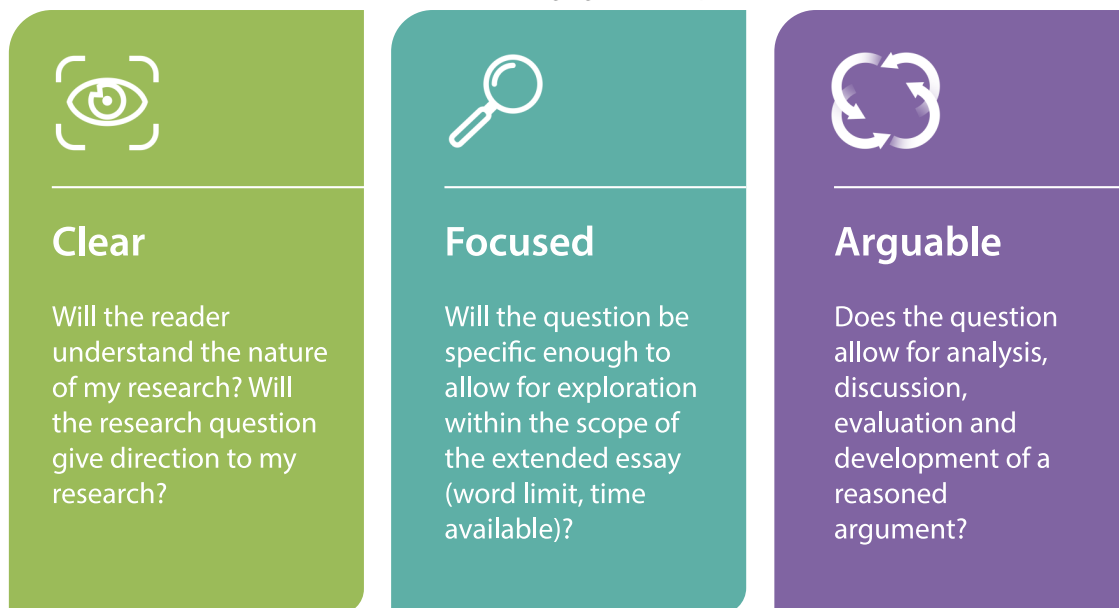
Consider and evaluate the emerging questions

Brainstorm some open-ended questions about your topic. These questions are best framed using the terms “how?”, “why?” or “to what extent?”. They can be thought of as your potential research questions.

The questions should then be evaluated, based on whether they are clear, focused and arguable, as in figure 14.

Figure 14

Evaluation of emerging research questions



Choose and refine your question and consider research outcomes

Following your evaluation of the emerging questions, choose one and make it your provisional research question. Now you can start thinking about the direction your research might take. Your thinking could focus on:

- suggesting possible outcomes of the research
- outlining the kind of argument you could make and how the research findings might support this
- considering options if the research sources available are not sufficient to sustain an essay of the depth and detail required.

Changing direction

For various reasons—such as newly emerging questions, loss of interest or lack of suitable resources—you may feel the need to change direction with your extended essay. This could mean changing or amending your research question or even finding a different topic and developing a new research question.

However, do not view this as a negative situation—always understand that a change is completely acceptable and will be supported by your supervisor. Sometimes just a slight change of wording is all that is needed. It is central to the success and enjoyment of your extended essay experience that you will be working on a project you find interesting and stimulating.

Ongoing reflection

As is strongly recommended in the “[Reflection and the extended essay](#)” section of this guide, your ongoing research and writing will be supported and strengthened if you keep a consistent record in your RRS of what you are doing and reflecting on. This record will also play an important part in informing what you write in the reflective statement that you must submit for assessment with your essay.

Writing your extended essay

Your extended essay should be clearly written in a formal academic style, appropriate to the subject(s) from which the topic is drawn. Given that the extended essay is a formally written research paper, it should strive to maintain a professional, academic look.

To help achieve this, follow this formatting guidance.

- Font size 12 and 1.5 line spacing—this helps the examiner with on-screen marking.
- Page numbering (mandatory), beginning with the first page following your contents page.
- Anonymity—there is no student, supervisor or school name anywhere in the file submitted.
- A file size smaller than 10 MB. Consider the size of embedded images, which may add considerably to the file size, and optimize them if needed. Note that the reflection and progress form (RPF) is uploaded separately and is not part of the overall file size of the essay.

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

Overall structure

The structure of your essay is very important because it helps you to organize your line of argument.

The following structural conventions must be present in the essay you submit for assessment.

- Title page
- Contents page
- Introduction
- Body of the essay
- Conclusion
- Reference list or bibliography

In addition to the recognized structure of any extended essay, as above, it is also important to incorporate any structural conventions that relate to the subject(s) you are using.

Word counts

The upper limit for all extended essays is 4,000 words. **Note that 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 negatively compromised across all assessment criteria. You should therefore ensure that your essay remains within the word limit. If the word count of your full draft is over 4,000 words you should edit it down accordingly.

The table below provides specific guidance on the content that is and is not included in the word count.

Included in the word count	Not included in the word count
The introduction	The contents page
The main body	Headers
The conclusion	Maps, charts, diagrams, annotated illustrations
Quotations	Tables
Footnotes and/or endnotes that are not references	Equations, formulas and calculations

Included in the word count	Not included in the word count
	Citations/references: whether parenthetical, numbered, footnotes or endnotes
	The bibliography
	The Reflection and progress form

Students writing in Chinese, Japanese or Korean

Students writing their extended essay in Chinese, Japanese or Korean should use the following conversions.

- Chinese: 1 word = approximately 1.2 Chinese characters (upper limit 4,800 characters)
- Japanese: 1 word = approximately 2 Japanese characters (upper limit 8,000 characters)
- Korean: 1 word = 1 word

When typing in Chinese, Japanese or Korean, word processing software is likely to include the number of characters **and** punctuation in the word count. Students should **not** include punctuation in the word count for assessed work. The word count should only reflect the number of characters typed.

A note on acknowledgements and dedications

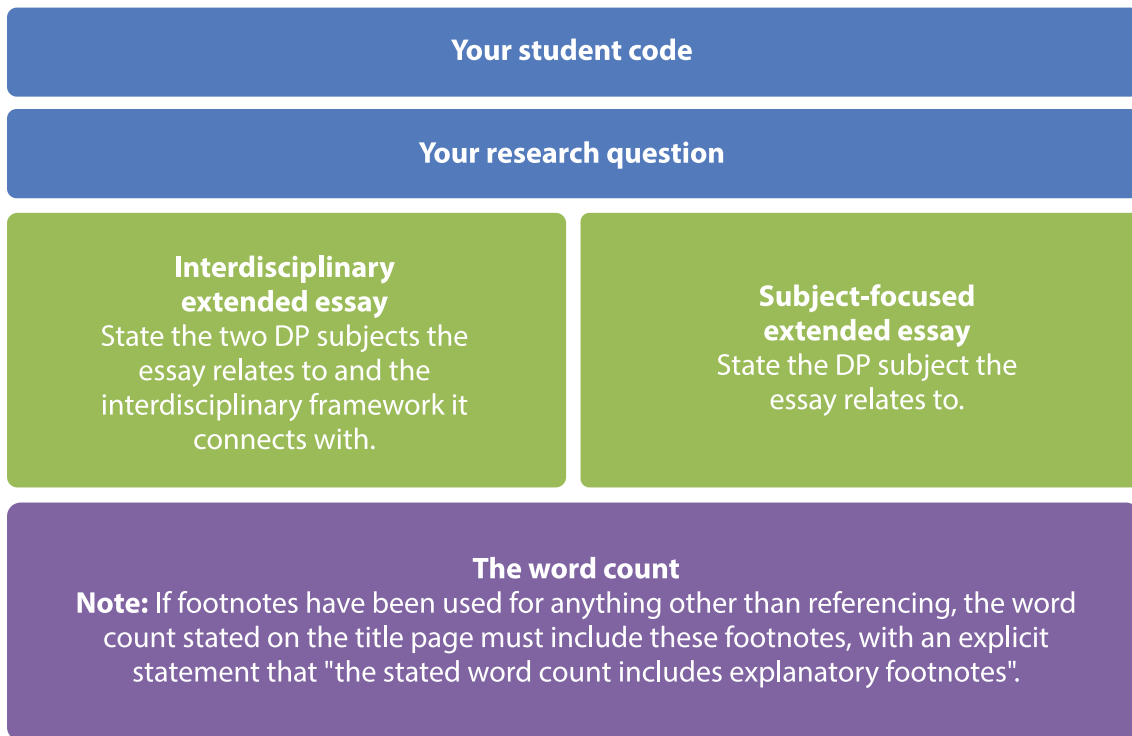
An acknowledgements page or dedications page is permitted in your extended essay, if this is important to you. But this is not a formal requirement of the extended essay, and therefore does not contribute either to the word count or the assessment score.

Note that an acknowledgements page or dedication page must not contain any “identifiers”: for example, the names of people that would make you or your school identifiable.

Title page

Your title page must clearly show the information indicated in figure 15.

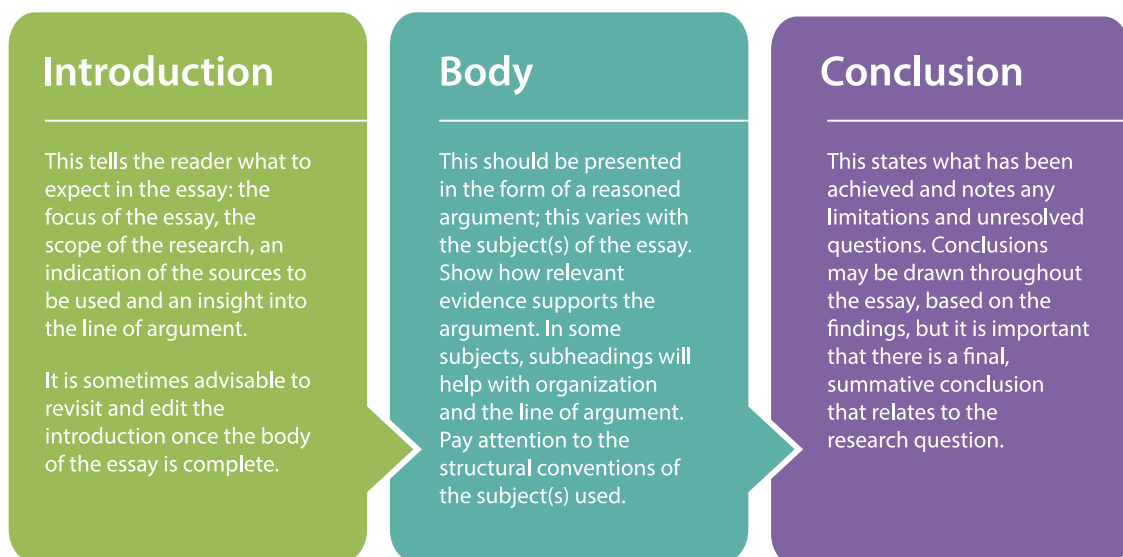
Figure 15
Information on the extended essay title page



Introduction, body and conclusion

Figure 16 summarizes the usual elements found in the introduction, the body and the conclusion.

Figure 16
Elements of the introduction, body and conclusion



Note: Any information that is important to your line of argument must not be included in appendices, footnotes or endnotes—examiners are not required to read these.

Footnotes and endnotes

You may use footnotes and endnotes for referencing purposes, that is, to cite sources you have consulted. If this is the type of footnote you include, they will not be included in the word count of the essay. However, if a footnote or endnote is not a reference, it will be included in the word count. For example, in academic papers and books, we sometimes see footnotes and endnotes that offer additional information, such as background comments.

To avoid unwittingly exceeding the word limit, you are advised to avoid adding this type of additional information footnote or endnote: it is better to include all necessary factual information, commentary and analysis in the body of the essay itself. Be aware that if an essay attempts to evade the word limit by including important material in footnotes or endnotes, its performance will be compromised across the assessment criteria.

Footnotes for quotations in an original language

One appropriate use of footnotes is for including an original quotation, where the original quotation is in a language other than the language of registration. This use of footnotes is **not** included in the word count.

Referencing sources not in the language of submission

An extended essay can use sources in languages other than that of submission where appropriate. In these situations, the IB advises that the sources, whether primary or secondary, can be used if necessary, that is, they are not excluded from the essay merely for not being in the language of submission. But note the following.

1. When referred to in the body of the extended essay as a quotation, the quotation should be given as a translation, and the original quotation added as a footnote.
2. If there is no official translation, you should translate the text yourself. Your supervisor should help you to ensure that, as far as possible, the translation is accurate and representative of the original text. If you find the translation task beyond your capabilities, it is advisable not to include that source in your research. Remember that in selecting sources, the nature of the subject in question needs to be considered—for example, in a language B essay, it is vital that you work mostly with authentic materials in the target language.
3. When a source is cited in the reference list or bibliography, the citation should be in the original language of the source. Where there is no official published translation, you should write a brief summary alongside the source. Your summary should be in the language of submission and include:
 - a. the title of the work
 - b. the name of the work's author
 - c. the focus of the work
 - d. any other relevant details.

When you provide this information, the examiner can assess the relevance and suitability of the source as required.

Reference list and bibliography

It is important to be aware of the distinction between a reference list and a bibliography.

- A **reference list** includes only sources you have cited in the body of the essay.
- A **bibliography** is a list of all the sources you consulted in any way during your research of the topic, including those cited in your essay as well as those you did not cite.

For detailed guidance on referencing and citation, refer to “[The ethical researcher](#)” section of this guide.

Citation and referencing

Citation and referencing help and support your work, even if they can take a little time. Good citation and referencing practices support academic integrity, but this is just one aspect of their function. Their main purpose is to support writers in building trust with their readers.

The table below delves into some of the main reasons for citing and referencing.

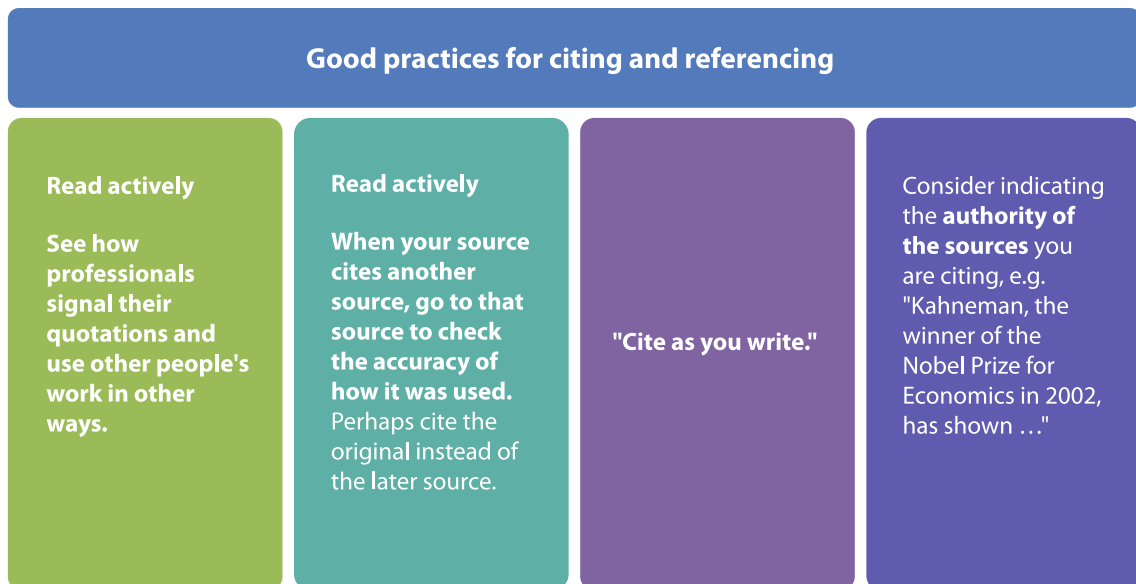
Why cite? Why reference?

How do citation and referencing help you when reading someone else's work?	How do citation and referencing help you in writing your own work?	How do citation and referencing help others reading your work?
You see evidence to support the points made by the author(s).	They help you keep track of the sources you used to develop the content of your extended essay. They help you find the sources again, and specific locations within those sources, e.g. of quotes, in case you want to use more information from that source.	They show that you are honest and have integrity; they establish your credentials as a competent researcher and author.
You can gauge the authority of the author(s). You may already know the author(s), but you can look them up if not. You can find how many times the work has been cited by others, investigate what others think about this work and the work of the author(s) in general.	They help you to check or recheck the accuracy of what you have said and the context in which it was used, e.g. when you review your essay before submission, you can check the source again.	They enable your readers to retrieve the sources for themselves, e.g. if they want to establish that you have used the information correctly.
You can see where the work was published; from this, you may be able to start assessing its worth. For example, you may gauge differently a post on Reddit, a sensationalist newspaper article, a blog post by an apparent expert and an article in a reputable academic journal.	They help you distinguish your own work from work you have used from other authors and sources.	They enable your readers to consult the sources for themselves, if they want to learn more from the source directly.
You can see when the work was published, i.e. how up to date or contemporaneous it is.	They enable you to give credit where it is due—to the authors of the sources you have used.	They show that you know the subject and have the evidence to support the points that you make.
You can expand your awareness of sources that are cited by others. Notice how others have used the source and whether they agree with it. Also, do others have more to say on this topic that you could also use?	They demonstrate whether you know who the most reputable authors are for the topic you are researching. They also demonstrate how widely you have carried out your research, i.e. have you also read other less well-	They allow the reader to gain a sense of how your range of sources may have contributed to your argument. They will then be able to follow your argument more closely and may be more persuaded about its validity.

How do citation and referencing help you when reading someone else's work?	How do citation and referencing help you in writing your own work?	How do citation and referencing help others reading your work?
	known but equally credible authors in the field?	
Following up on sources may spark your own new ideas to include in your extended essay or to pursue generally for your own satisfaction.	They show that you know and understand the writing conventions of your subject.	

Figure 17

Good practices for citing and referencing



Referencing online materials

If you feel unsure how to reference online materials, here are some pointers.

- Your reference must include the title of the extract, the website address, the date it was accessed and, if possible, the author.
- The IB requires that your reference for any online sources must include the date you accessed the resource.

Furthermore, be cautious with information found on websites that do not give references or that cannot be cross-checked against other sources. If in doubt, look for another, more reliable source.

The ethical researcher

A significant aspect of your extended essay experience is learning about what it means to be an ethical researcher. This important approach and mindset is something that you can take forward with you to future studies, work and life in general.

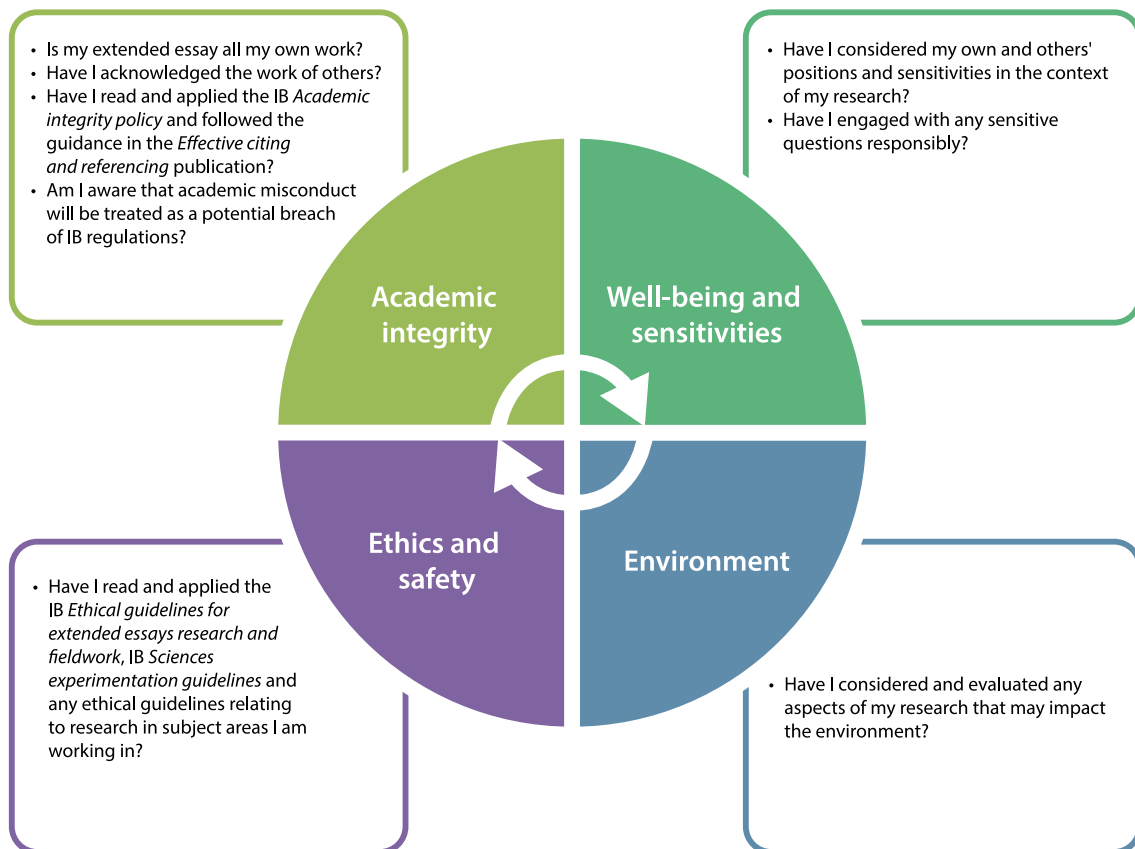
Components of ethical research

As shown in figure 18, your capacity to research ethically depends on:

- how well you understand and implement the principles and practices of academic integrity
- awareness of sensitivities around the topic being investigated, both from your point of view and the perspectives of people involved in your research
- awareness of ethical and safety issues relating to people or animals connected with your research
- awareness of any potential impact of your research on the environment.

Figure 18

Components of ethical research



Academic integrity

In the world of research, academic integrity is essential. Readers must be able to trust the honesty and the accuracy of the information they read.

The extended essay may be your first step into the world and culture of research. See this as an important learning opportunity, focus well and take what you learn forward to future studies and work contexts.

There are several strands to academic integrity in the extended essay. It is essential that:

- **your work is authentically yours, with any help or support given by others clearly acknowledged.** This guide includes advice on what forms of support are permitted and what support is not: see the “[Support and supervision of the extended essay](#)” section in this guide. You should be aware that your supervisor is only permitted to comment in writing on the full draft of your extended essay. You must do your own proofreading, carefully checking your extended essay draft to edit spelling and grammar, check formatting, and ensure you have not exceeded the 4,000-word limit.
- **those who read your essay can distinguish between your work and other people's work that you have used.** Other people's work should be indicated by citations, footnotes and entries in the reference list and bibliography, as appropriate. Word-for-word quotations must appear within quotation marks or be presented as indented paragraphs. Refer to the “[Writing your extended essay](#)” section of this guide for further guidance.
- **readers are able to trust that you are reporting your research and your findings as fully and accurately as possible.**

In summary, authenticity is fundamentally important to your work's integrity as well as your own personal integrity. To this end, it is important that you are aware of the inappropriateness of collusion.

Collusion

Collusion involves cooperation between yourself and other students to complete work that is to be submitted for assessment. This is not permitted. Discussing your ideas with others is fine, but any work submitted for assessment must be entirely your own individual work. This is different from the group assessment work you may encounter in other areas of your studies, that is, where you have been instructed to work together and the work is assessed as a group effort. Collusion in producing individual work for assessment is a breach of academic integrity.

Specifically, you should not:

- allow your work to be submitted as part of another student's assessment
- include the work of another student as your own for assessment
- co-write information that you will use in your assessable work.

Your own work

You may be aware of people and websites that offer services ranging from correcting and editing your work to actually writing your work for you. If you use these services and present their output as your own, this is dishonest and demonstrates a lack of integrity.

Note also the fine line between using software to check your spelling and grammar or to generate references for your reference list and bibliography, and using software that might write a complete essay when instructed. Most grammar and spell-checking software still requires you to check that its suggestions are correct and acceptable.

Using artificial intelligence (AI) to write an essay that is then presented as your own is dishonest and demonstrates a lack of integrity. Instead, think about how you might use AI software as a tool to help you in your research in a permissible, positive way. For example, material generated by AI can be considered as one of your resources, alongside resources gathered in more conventional ways (e.g. websites, academic articles, books), always acknowledged and cited appropriately. However, it is important to check and validate information generated by AI, perhaps by corroborating it with information gathered from other sources. Given the capacity of AI to “hallucinate”, it is wise to use more conventional search engines for the

investigative stage of your research because these search for and list human-produced content. AI may also be used to help you compare and evaluate other resource materials.

For further guidance on the use of AI, refer to Appendix 6 in the IB *Academic integrity policy*, and this infographic: *The IB and artificial intelligence tools*.

In summary, be clear that if you are found to have breached IB regulations on academic integrity or ethical research guidelines, you put your diploma at risk.

Your values and skills

As a principled learner:

- you will know how to cite and reference other people’s work and do this in all your work and other activities—academic integrity is not just for the extended essay
- you will be in the habit of “citing while writing” (instead of trying to find and add citations once the work is completed)
- you have learned and continue to learn how to use other people’s words and ideas, not to directly say what you want to say, but instead to support your own ideas and conclusions when you say them
- in your practical work, you do not fabricate data to fit what you think it should be; in your writing, you do not make up quotations to support your arguments nor attribute real quotations to the wrong people
- you learn from the feedback you are given and you learn from your mistakes.

If you put these ideas into practice, you have integrity and your work has integrity—it is authentically your work.

Using the RRS to help with academic integrity

It is helpful to put into practice good note-making and organizational skills as you research and write your essay. Your RRS is a useful memory tool for this. Develop the habit of classifying entries in your RRS that reflect your reading, viewing and thinking, according to the following criteria.

- Is the entry your own thoughts or a note of someone else’s work?
- If the entry comes from someone else, is it a copy-and-paste quotation, a paraphrase in your own words or a summary in your own words?
- If the entry comes from someone else, record all the bibliographical details you can find: author, title, page number (if in a printed volume), the URL and name of the site for web content, the date of publication and/or revision, and any other information that could be helpful. At this stage, do not worry about formatting these details; that can come later if you use what you have noted.
- If you are making several notes from the same source, copy-and-paste the bibliographic details into each entry. Getting into this habit will save much time later if you use this source in your essay.

Take advantage of every opportunity provided by your school to learn the values and skills associated with academic integrity. Actively seek support from your supervisor and others to clarify anything you are not sure about, and practise your skills in all your work, not just the extended essay. The more you practise, the more you will be able to demonstrate what it is to be an academic writer.

Well-being and sensitivities

Researching and writing an extended essay provides you with an opportunity to engage with interesting, stimulating topics and issues that are important to you. Nonetheless, sometimes topics and issues can be sensitive for others and personally challenging for you as the researcher. It is highly recommended that you talk with your supervisor and extended essay coordinator in these circumstances. They can advise you on how to approach and engage with a sensitive topic in a responsible manner. The IB’s *Ethical guidelines for extended essays research and fieldwork* will help you think through these issues and make good decisions.

Ethics and safety

The *Ethical guidelines for extended essays research and fieldwork* document will help you to navigate ethical questions and issues by providing guidance relating to such topics as:

- the physical and mental comfort of participants in your research
- addressing the importance of cultural contexts
- respect for privacy and confidentiality
- informed consent of participants.

Your safety and the safety of others is paramount in research that involves experimentation. The IB *Sciences experimentation guidelines* is essential reading if an experiment is part of your research plan. The guidelines cover important topics, including:

- animal behaviour experiments
- animal dissection
- fieldwork
- handling of equipment, chemicals and waste disposal
- human physiology experiments
- microbiological studies
- risk assessment.

Environment

As in all aspects of your life, it is important to be aware of the potential impact of your extended essay research and associated activities on the environment. You should evaluate circumstances and take preventative action in relation to aspects such as:

- the potential impact of your fieldwork on the natural environment, including animal habitats
- pollution of the natural or built environments
- your choice of modes of travel
- sustainable use of materials during your research and writing, e.g. paper, writing implements, digital devices, electricity.

Reflection and the extended essay

Reflection is an activity in which you recapture your experience and think about its impact on you as a learner. This includes how you envisage transferring the skills and lessons you have learned to other circumstances, including future studies, career or life in general.

- To assist you with this, there are **three formal reflection sessions** with your supervisor.
- Your reflective thinking is recorded as a **500-word reflective statement** that is written at the end of the extended essay process.
- Keeping an ongoing record of your reflective thinking will support you in the writing of the reflective statement.

The researcher's reflection space

Use of an RRS is strongly recommended because it will allow you to understand and articulate your extended essay experience and the decisions you make more clearly. An RRS supports learning, thinking, critical analysis and evaluation, and helps you produce an extended essay that you will be proud of. Importantly, it is an excellent source when it comes to writing your reflective statement towards the end of the process.

The RRS is a personal learning environment that can be either a physical or virtual support tool. It is a space that helps you to connect personally with your topic and keep yourself motivated, a place where you can record reflections on what you are reading, writing and thinking. The RRS will help you prepare for reflection sessions with your supervisor as you look back on:

- personal reflections of the process of researching and writing your extended essay
- your responses to artefacts such as photos, newspaper clippings, social media feeds, blogs
- reactions to discussions that occurred in your classes or elsewhere
- your brainstorming of ideas
- your record of emerging questions.

Your RRS is also a planning tool that helps to scaffold the development of approaches to learning skills and conceptual understandings that are revealed as you research. The RRS can track the evolution of your thinking because it relates to the development of the line of argument in your essay. Think of your RRS as an expression of your voice in the overall extended essay experience, and do not hesitate to use excerpts from it when you speak with your supervisor. This brings a real sense of ownership and authenticity to your discussions, as well as demonstrating your planning and progress, and sharing what you are learning.

Reflection sessions and check-ins

It is important to distinguish between check-ins with your supervisor and the three mandatory reflection sessions. They are not the same.

You are encouraged to check in with your supervisor in between the mandatory, formal reflection sessions. How often you do this will depend on your needs and your supervisor's requirements. A check-in may be a quick 10-minute chat about a timeline or clarification of feedback. Or it could be a longer discussion about, for example, access to resources. These check-ins do not form part of the formal reflection process and do not need to be recorded on the RPF. Nevertheless, they are an important part of the supervision process.

Formal reflection sessions

Attendance at the three mandatory reflection sessions with your supervisor must be recorded on the RPF. It is recommended that these last 20 to 30 minutes. You need to be well prepared for the sessions, where your supervisor will prompt you with questions. They will focus on progress made and help you set clear objectives for moving forward. You may therefore find it useful to share excerpts from your RRS in the session.

What happens at the three reflection sessions?

In each of the reflection sessions, you discuss your extended essay experience with your supervisor. To make this a useful aspect of your reflective thinking, you should keep a record of the discussions.

- The first reflection session is a dialogue between you and your supervisor based on your initial explorations.
- The interim reflection session is a continuation of the dialogue, where you demonstrate the progress you have made in your research. You discuss any challenges you have encountered, offer potential solutions and seek advice as necessary.
- The final reflection session, or viva voce, is a discussion celebrating the completion of the essay and reflecting on what you have learned from the process. It is an opportunity to discuss holistic evidence of your learning, and the authenticity of your ideas. The viva voce provides an important source of ideas for your reflective statement.

Preparing for the reflection sessions

First reflection

Your preparation	Questions to think about	Your supervisor should ...
<ul style="list-style-type: none"> • Think about potential topics of personal interest and do some initial background reading. • Browse “The interdisciplinary pathway” and “The subject-focused pathway” sections of this guide. • Do further background reading and gather preliminary information around your area(s) of interest. Take note of the availability of resources. • Record all of this in your RRS. • Brainstorm your potential topic, then draft a possible research proposal. 	<ul style="list-style-type: none"> • Why am I interested in this topic and why is it important? • Is my topic appropriate for the DP subject(s) I am considering? • What possible questions have emerged from my initial reading? • Are there any ethical issues that I need to consider at this early stage? • What research methods or approaches can I use? Why would these be suitable? 	<ul style="list-style-type: none"> • discuss the requirements of the extended essay and the assessment criteria • discuss any ethical and legal implications of your topic, if applicable • discuss strategies for developing your ideas, and possible approaches to research • prompt you with questions that will help you focus your thinking and develop an initial research question • outline next steps and encourage you to develop a timeline for research and writing.

Interim reflection

Your preparation	Questions to think about	Your supervisor should ...
<ul style="list-style-type: none"> • Talk about your extended essay topic with others, e.g. 	<ul style="list-style-type: none"> • Is my topic still important to me and to others? 	<ul style="list-style-type: none"> • discuss a completed piece of your writing to help ensure

Your preparation	Questions to think about	Your supervisor should ...
<p>your supervisor, subject teachers, the extended essay coordinator, the librarian.</p> <ul style="list-style-type: none"> • Draft an appropriate, focused research question. • Deepen your research and record relevant information or data in your RRS. • Feel confident in, and able to talk about, your current approach and current research methods. • Be able to talk about the line of argument you intend to develop in your essay. • Add to the working reference list and bibliography for your research. 	<ul style="list-style-type: none"> • Does my research question need amending? • Are there any barriers I need to overcome to move forward? • Are there any ethical issues that have emerged since my first reflection session? • Are the research methods I have chosen working effectively? • Am I satisfied that I have: <ul style="list-style-type: none"> • a clear, focused research question • a viable line of argument • a good range of resources • a good understanding of next steps to complete the writing of my essay? 	<ul style="list-style-type: none"> • that you understand the requirements of academic writing • establish that you have critically evaluated an appropriate range of resources • advise you on making your next steps manageable as you move forward to produce a full draft of your essay • advise you regarding any amendment to your research question that may be necessary, minor or more significant.

Final reflection (viva voce)

Your preparation	Questions to think about	Your supervisor should ...
<ul style="list-style-type: none"> • Bring extracts from your RRS that illustrate how you have grown as a learner. • Be willing to share your personal experience and to discuss the development of skills and conceptual understandings that you have acquired through your extended essay experience. • Be able and prepared to talk about both successes and challenges you have experienced. 	<ul style="list-style-type: none"> • Can I confidently say that my essay is authentic? • Does my essay conform to the IB <i>Academic integrity policy</i>? • What skills and understandings have I learned? How could these be transferred to other situations, now and in the future? • What challenges have I experienced and how have these been overcome? • What aspects of the extended essay experience have I enjoyed the most? 	<ul style="list-style-type: none"> • carry out a 20 to 30-minute interview with you, called a viva voce: a celebration of the completion of your essay and a reflection on what you have learned from the process • have read the final version of your essay before this reflection session.

The reflective statement

Your reflective thinking is recorded as a 500-word reflective statement, written at the end of the extended essay process and included on your RPF. Keeping a thoughtful, regular record of your reflective thinking along the way is essential to putting together a satisfying, effective reflective statement to accompany your essay.

What resources can I use to help me write the reflective statement?

- My record of the viva voce
- My record of the other reflection sessions with my supervisor
- My completed extended essay
- My RRS or any other record of my reflective thinking
- Informal feedback from my supervisor and others

What might I address in my reflective statement?

- The main ideas discussed in the viva voce
- Learning skills I developed that I could use elsewhere as a learner
- Insights I gained from researching and writing the extended essay
- Changes in my perspective on the topic
- The impact of the choices I made during the extended essay process
- Experiences and insights that could shape my future thinking

How will my reflection be assessed?

Your attendance at the three reflection sessions will be recorded on the RPF. The form will also provide a space for you to write your 500-word reflective statement and will be submitted with your extended essay.

Examiners will assess your reflective statement using criterion E, which centres on the guiding question “Does the student evaluate the effect of the extended essay learning experience on them as a learner?”. Examiners will look for the following features in your reflective statement.

- Reflection on the extended essay learning experience is consistently **evaluative** and includes specific examples.
- Reflection consistently shows evidence of the student’s **growth** and transfer of learning.

Evidence referred to in your reflection may be drawn from, but is not limited to, some of the following.

- Experiences and insights that could shape future thinking.
- Explicit examples of how skills learned could be used in other current contexts and in the future.
- How changes in perspective impacted decision-making.

Support and supervision of the extended essay

Responsibilities

Responsibility for the smooth operation of the extended essay experience is shared between:

- the school
- the DP and/or extended essay coordinator
- the supervisor
- the student.

The table below outlines the different responsibilities.

Actor	Responsibilities
School	<ul style="list-style-type: none"> • Ensures that the DP and/or extended essay coordinator understands who can and cannot be a supervisor. • Provides organizational structures that allow for effective supervision of the extended essay, including three mandatory reflection sessions with the supervisor.
DP coordinator or extended essay coordinator	<ul style="list-style-type: none"> • Ensures that extended essays conform to the regulations outlined in the <i>Diploma Programme Assessment procedures</i>. • Ensures that students align the subject(s) for their extended essays with the list of available subjects for the relevant May or November examination session, as indicated in the <i>Diploma Programme Assessment procedures</i>. • Ensures that each student has an appropriate supervisor who is a member of staff within the school. • Introduces, explains and supports the supervision and reflection process. • Provides supervisors and students with access to all the information and guidance they need that is contained in this guide and the accompanying support material, including relevant examples of extended essays for reference. • Ensures that the extended essay and the RPF are completed, authenticated and submitted to the IB by the deadline stated in the <i>Diploma Programme Assessment procedures</i>. • Ensures that supervisors and students are familiar with the IB documents <i>Academic integrity policy</i> and <i>Effective citing and referencing</i>. • Provides students and supervisors with a schedule of internal school events and deadlines dedicated to or relating to the extended essay. • Explains to students the importance of the extended essay in the overall context of the DP, including the requirement to achieve a D grade or higher to be awarded the diploma. • Explains to students that they will be expected to spend up to 40 hours on their extended essay.
Supervisor	<ul style="list-style-type: none"> • Provides appropriate support and guidance to students who are being supervised, including a suitable number of check-in meetings.

Actor	Responsibilities
	<ul style="list-style-type: none"> Ensures students have access to all the information and guidance they need that is contained in this guide and the accompanying support material, including relevant examples of extended essays for reference. Undertakes three mandatory reflection sessions with the student. Records on the RPF the student's attendance at each of the three mandatory reflection sessions and ensures that they have completed their reflective statements in the appropriate space on that form.
Student	<ul style="list-style-type: none"> Ensures that their extended essay aligns with a DP subject or subjects as per the subjects listed as available for the relevant examination session. Consults with the DP coordinator or extended essay coordinator to obtain the details. Ensures that their extended essay conforms with policies and expectations regarding academic integrity and ethics. This includes understanding the implications of the "B1 General regulations: Diploma Programme" section in the <i>Diploma Programme Assessment procedures</i> if there is a breach of these. Reads, understands and uses all the relevant information and guidance available in this guide and support material. Refers to the supervisor for details and access. Meets all internal deadlines set by the school in relation to the extended essay. Attends three mandatory reflection sessions with the supervisor. Records their reflective statement on the RPF.

Support from the school library

The school librarian or library team can play an important role in supporting students through the extended essay process, including providing training in a range of research and information literacy skills. Some of the potential support they can provide to students is outlined in the table below.

Guidance on developing and refining a research question	Guidance on the research process and related skills
Navigating a library's resources	Accessing and evaluating print and online resources
Evaluating the authority and bias of authors	Developing an RRS
Developing an understanding of academic integrity	Providing guidance on applying a consistent referencing style
Providing guidance on how to access and use research databases	Guiding students on the scope of research and relevance of information

The supervision process

To assist students in successfully completing their extended essays, the process needs to be clearly structured. It must incorporate supervision of three to five recommended hours by allocated extended essay supervisors, including three mandatory formal reflection sessions with the student as well as regular check-in meetings.

It is mandatory that a record of attendance at the three formal reflection sessions, and the text of the student's reflective statement, are both included on the RPF. The RPF must be submitted with the completed extended essay for assessment under criterion E (reflection).

Who can be an extended essay supervisor?

An extended essay supervisor should be an educator who works at the school attended by the student. Schools should have in place a process for matching the needs of extended essay students with the available staff resources. Ideally, a supervisor will have some expertise in the subject area(s) that relate to the student's extended essay topic. However, it is important to emphasize that the supervisor is primarily a guide and mentor, and that the responsibility for research and writing lies with the student, who will benefit from working and learning independently. Therefore, a supervisor's guidance is best focused on questioning, prompting, suggesting and recommending, rather than offering subject expertise.

External mentors

If possible, students should carry out the research for the essay solely under the direction of a school-allocated supervisor and within the school. Nevertheless, in circumstances where the school deems it appropriate, students may undertake their research at an institute or university under the guidance of an external mentor. This must be with the agreement of the school, and the external mentor must be provided with a form outlining the nature of the extended essay, relevant sections of this guide, and clear instructions about the level of guidance that is permitted. Schools are responsible for ensuring that these external mentors are aware of the limits of their role in providing this service. In this circumstance, the student must still be allocated a supervisor within the school and undertake their reflection sessions with this person. Only a supervisor within the school is permitted to complete the reflection process for the extended essay with the student and provide signatures on the RPF.

Download the [extended essay external mentor form](#) here.

The form for the external mentor, which must be electronically signed by the external mentor, must be inserted in the appendix of the essay as part of the document file rather than as a separate document. If a student has had an external mentor, this signed form is an important part of the authentication of the essay.

As the extended essay is an independent task and a formal assessment component, students are not allowed to receive assistance with any aspect of the research, writing or proofreading of the essay beyond that which is permitted through their supervisor. If a supervisor suspects that the extended essay submitted for assessment by a student could not have been completed without assistance, they are required to bring this to the attention of the DP or extended essay coordinator, who in turn must inform the IB. This may then be investigated as a possible case of academic misconduct.

Role of the external mentor when there is no internal member of staff who can engage with the target language

When an external mentor is utilized because there is no internal member of staff who can engage with the target language, the external mentor is permitted to comment on one full draft of the essay and conduct the reflection sessions as per the usual rules for a supervisor. Once the extended essay and the RPF have been completed, their authenticity needs to be attested by an internal member of staff, who should be working with the external supervisor.

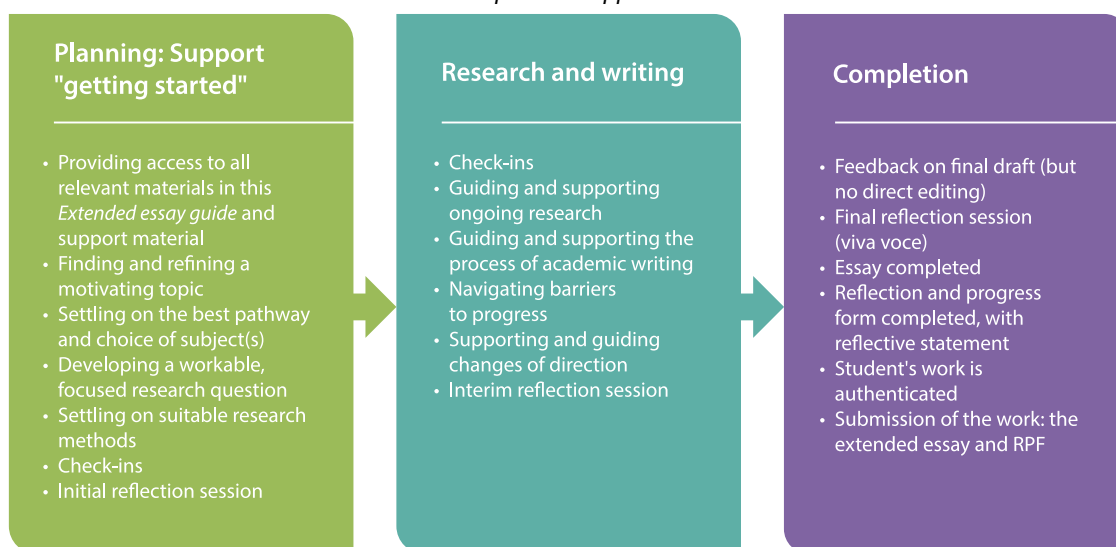
The role of the supervisor

The mentoring nature of the supervisor–student working relationship is pivotal to the smooth operation of the extended essay process. Sometimes, the student and supervisor will have a pre-existing and positive working relationship, established in other areas of learning in the DP. If not, it is worthwhile investing time in getting to know each other a little better as the basis for a comfortable, effective, ongoing connection, with the common goal of producing an extended essay that represents the student's best efforts.

The supervisor–student relationship should be active and two-way. The supervisor should support and guide the student as they plan, research and write their essay, undertake their reflection sessions and, ultimately, complete and submit their work for external assessment. Figure 19 shows how supportive supervision and guidance are integral to the planning, research, writing and completion stages of the extended essay experience.

Figure 19

How the supervisor supports a student



Responsibilities of the supervisor

Supervisors need to ensure that their students are familiar with the requirements of the extended essay. They should discuss with students:

- the nature of the extended essay
- the appropriate extended essay pathway to follow
- the topic, research question and DP subject(s) being used
- the most appropriate research methods to use
- the formal requirements that need to be satisfied to complete the extended essay.

Students should be encouraged to initiate discussions with their supervisor to obtain advice, but the role of the supervisor should be explained to them so that there is a shared understanding of expectations and responsibilities. If it emerges that a student is struggling to complete their work without substantial, boundary-crossing support from their supervisor, or any other teacher, this should be discussed at an early stage with the DP or extended essay coordinator, so that strategies can be developed to encourage the student to work more independently. If academic misconduct is suspected, supervisors must report this to the DP or extended essay coordinator.

Ultimately, no student work should be uploaded or submitted to the IB if its authenticity is in doubt. When the RPF and essay are submitted via the eCoursework system, then the student’s work is considered authenticated. If an RPF is blank, unsubmitted or written in a language other than that of the essay, the student will be awarded zero for criterion E.

Supervisors should note that the IB is unable to comment on the suitability of students’ specific research questions. This is because the development of an appropriate research question forms part of the assessment.

Supervisors are required to:

- undertake three mandatory reflection sessions with each student they are supervising
- be available for regular check-ins with students
- record on the RPF the student’s attendance at each of the mandatory reflection sessions.

Supervisors are required to:

- provide students with advice and guidance on research skills and methods appropriate to the pathway and subject(s) chosen, in conjunction with information sessions or workshops that may be organized by the school
- discuss the choice of topic, pathway (interdisciplinary or subject-focused) and subject(s), the approach and the design of a suitable, focused, manageable research question
- encourage and support students throughout the research and writing of the extended essay
- ensure that the student satisfies appropriate legal and ethical standards with respect to health and safety, confidentiality, human rights, animal welfare and environmental issues
- ensure that students have direct access to all the materials they need from this guide (including the assessment criteria) and the support material
- ensure that students are familiar with the regulations governing the extended essay
- monitor the progress of the extended essay to offer guidance and to ensure that the essay is the student's own work; this may include reviewing and discussing a piece of writing from the essay
- read and comment on one draft only of the essay (no direct editing is permitted); this should take place after the interim reflection session and before the final reflection session
- ensure that the student hands in the final version of the essay before the final reflection session (viva voce) takes place, and that no changes are made to it subsequently
- read the final version and, in conjunction with the viva voce, confirm its authenticity
- ensure that the student's reflective statement is completed and included on the RPF
- support the DP or extended essay coordinator with the submission of the RPF and essay via the IB eCoursework system.

The student may work with or consult external experts, but it remains the responsibility of the supervisor allocated by the school to attend to all the requirements described above. It is also relevant to refer to the "Support and supervision of the extended essay" section of this guide, where the role of external mentors is described.

In addition, it is strongly recommended that supervisors:

- read recent extended essay reports in the subject area(s) in which their students are working; these are typically found in the specific DP subject areas of the Programme Resource Centre
- spend three to five hours with each student, including the time spent on the three mandatory reflection sessions
- encourage students to maintain an RRS
- plan and communicate to the student an appropriate schedule for the reflection sessions and other extended essay landmark dates
- advise the student on access to appropriate resources, such as people, a library, a laboratory
- advise the student on effective citing and referencing, in conjunction with relevant IB documents and information sessions or workshops that may be offered by the school.

Completing and submitting the RPF

Completing the RPF is a requirement for the submission of the extended essay. The RPF plays an important role in the assessment of the final essay and represents the learning and personal growth of the student. The following is offered as guidance for the completion and submission of the form.

- DP or extended essay coordinators, with the support of their school leadership team, must determine a system for the administration of the RPF. This should be designed to ensure that both students and

supervisors have access to the RPF so that they can complete the required summative comments. This system also needs to ensure the integrity of the form, i.e. that it cannot be tampered with.

- The maximum word count for the reflective statement on the RPF is **500 words**. Examiners will not read or assess beyond the maximum limit, so students whose word count exceeds this will be compromising the assessment of their reflection.
- The RPF must be completed in the language of the student's extended essay submission. If it is submitted in a language other than that of the essay, then the mark for criterion E (reflection), which concerns the RPF only, will be zero.
- If the RPF is not submitted, or is blank, a zero will be awarded for criterion E.

The RPF can be found on the extended essay website ([Home > In practice > Reflection and progress form](#)). The form includes drop-down options for the month and DP year to indicate when the reflection sessions have taken place during the student's DP or extended essay studies. If a student is a retake student, use "DP year 2" to indicate reflections that have taken place in the academic year that the student will submit their essay.

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. All students and supervisors must confirm the authenticity of the work that is to be uploaded to the eCoursework system. Once the authenticity of the student's work has been determined, it is ready to be uploaded to the eCoursework system for assessment. At this point, the supervisor must not allow any retraction of the essay by the student for modification purposes unless there has been an administrative oversight.

The completed RPF is initialled and dated by the supervisor. Then it can be uploaded to the IB eCoursework system with the essay. The upload process represents authentication of the student's work.

It is extremely important that supervisors can confirm that they have followed the guidance for monitoring the student's work throughout the process and can, to the best of their knowledge, confirm the authenticity of the work at submission (please refer to the *Diploma Programme Assessment procedures*).

If the supervisor is unable to confirm the authenticity of the work, this must be brought to the attention of the DP coordinator, who in turn should refer to the *Diploma Programme Assessment procedures* for guidance. No piece of student work should be uploaded or submitted to the eCoursework system if its authenticity is in doubt. It should be fully understood and noted that work that is submitted but does not comply with the expectations and requirements outlined in this guide will be treated as a case of academic misconduct.

At any stage during the extended essay process, if authenticity is in doubt, the supervisor's first step should be to discuss this with the student. In addition, one or more of the following actions may be helpful.

- Compare the style of writing with work known to be that of the student.
- Compare the final submission with the first draft of the written work.
- Check the references cited by the student and the original sources referenced.
- Interview the student in the presence of a third party.
- Use software that is designed to detect and prevent plagiarism.

It is the responsibility of supervisors to ensure that students understand the meaning of academic integrity, especially the concepts of authenticity and intellectual property. Supervisors must ensure that students understand that the extended essay must be entirely their own work. It should also be made clear that the same piece of work cannot be submitted to meet the requirements of both the extended essay and another DP assessment component.

For further guidance on this issue and the procedures for confirming authenticity, refer to the *Diploma Programme Assessment procedures*.

Academic integrity: Ensuring authenticity

At least four elements of the extended essay process help the supervisor to ensure that the essay is all the student's own work.

- Training and guidance
- Regular check-ins
- Reviews of draft material
- The reflection sessions

The goal is to help students develop the values and skills associated with academic writing and integrity and to prevent or pre-empt academic misconduct.

Supervisors will find it useful to refer to the "Academic integrity" section of the *Extended essay support material* for specific guidance.

Acknowledging the ideas or work of another person: Minimum requirements

Supervisors are reminded that students must acknowledge all sources used in work submitted for assessment. The following is intended as a clarification of this requirement.

DP students submit work for assessment in a variety of media that may include audiovisual material, text, graphs, images and data published in print or electronic sources. If students use the work or ideas of another person, they must acknowledge the source using a standard style of referencing in a consistent manner.

The IB does not prescribe which style(s) of referencing or in-text citation should be used by students; this is left to the discretion of the student's school. The wide range of subjects used in the extended essay, the different response languages and the diversity of referencing styles make it impractical to insist on a particular style. Therefore, schools are free to choose a style that is appropriate for the subject concerned and the language in which students' work is written. However, the following criteria should be applied.

- Students are expected to use a standard style and use it consistently, ensuring that acknowledgement is given to all sources used, including those that have been paraphrased or summarized.
- When writing, students must clearly distinguish between their words and those of others using quotation marks, or another method, such as separating the quote on a new line and indenting it, followed by an appropriate citation that connects with an entry in the reference list.
- Students are not expected to be faultless in referencing but should demonstrate that all sources have been acknowledged.
- Students must be made aware that for any audiovisual material, text, graphs, images and data that are crucial to their work and that are not their own, they must also attribute the source, using an appropriate style of referencing or citation.
- Regardless of the reference style adopted by the school for a given subject, it is expected that the minimum information given includes the:
 - name of the author
 - date of publication
 - title of the source
 - page numbers if applicable, e.g. if the source is an article in a larger journal
 - date the source was accessed (electronic sources)
 - URL if the source is web-based.
- The reference list and bibliography should adhere to the minimum requirements as summarized in the section "Elements to be included in a reference" at the end of the *Effective citing and referencing* publication.

Note: Examiners are required to alert the IB when minimum referencing and citing requirements are not met by a student, and the work will then be investigated accordingly.

An important note on “double-dipping”

Students must ensure that they are not using material submitted for any other DP assessment element as part of their extended essay submission. While resources can be shared between elements, it is advisable to avoid this. Resources used for an internal assessment (IA) task, for example, may be relevant to an extended essay topic. However, it is important to note that none of the student's content from one of their submissions can be duplicated in another submission. To prevent any “double-dipping”, the student will need to have a substantially different angle and focus for the extended essay investigation. Supervisors play an important role in guiding students on these distinctions, bearing in mind that students risk not being awarded their diploma if academic misconduct is detected.

Submission requirements

After commenting on one full draft, the next version of the essay that the supervisor sees must be the final one submitted to them before the viva voce. This version of the extended essay must be “clean”: it must not contain any comments from the supervisor or any other person. Once this version has been submitted to the supervisor and discussed, students are not permitted to make any further changes to it, unless deemed appropriate by the supervisor because of an administrative error. For this reason, students must ensure that their work meets all formatting and submission requirements before it is uploaded.

Assessment in the Diploma Programme

Assessment is an integral part of learning and teaching. The most important aims of assessment in the Diploma Programme (DP) are that it should support curricular goals and encourage appropriate student learning. Both external assessment and internal assessment (IA) are used in the DP. IB examiners mark work produced for external assessment, while work produced for IA is marked by teachers and externally moderated by the IB.

There are two types of assessment identified by the IB.

- Formative assessment informs both learning and teaching. It is concerned with providing accurate and helpful feedback to students and teachers on the kind of learning taking place and the nature of students' strengths and weaknesses. This helps to develop students' understanding and capabilities. Formative assessment can also help to improve teaching quality because it can provide information to monitor progress towards meeting the course aims and objectives.
- Summative assessment gives an overview of previous learning and is concerned with measuring student achievement at or towards the end of the course of study.

A comprehensive assessment plan is viewed as integral to learning, teaching and course organization. For further information, see the IB *Programme standards and practices*.

The approach to assessment used by the IB is criterion-related, not norm-referenced. This approach judges students' work by their performance in relation to identified levels of attainment, not in relation to the work of other students. For further information on assessment within the DP, please refer to the publication *Assessment principles and practice—Quality assessments in a digital age*.

To support teachers in the planning, delivery and assessment of the DP courses, a variety of resources can be found on the Programme Resource Centre or purchased from the IB store (store.ibo.org). Additional publications such as specimen papers and markschemes, teacher support material, subject reports and grade descriptors can also be found on the Programme Resource Centre. Past examination papers as well as markschemes can be purchased from the IB store.

Methods of assessment

The IB uses several methods to assess work produced by students. The methods applied to the extended essay are assessment criteria and markbands.

Assessment criteria

Assessment criteria are used when the assessment task is open-ended. Each criterion concentrates on a particular skill that students are expected to demonstrate. An assessment objective describes what students should be able to do, and assessment criteria describe how well they should be able to do it. Using assessment criteria allows discrimination between different answers and encourages a variety of responses. Each criterion comprises a set of hierarchically ordered level descriptors. Each level descriptor is worth one or more marks. Each criterion is applied independently using a best-fit model. The maximum marks for each criterion may differ according to the criterion's importance. The marks awarded for each criterion are added together to give the total mark for the piece of work.

Markbands

Markbands are a comprehensive statement of expected performance against which responses are judged. Markbands represent a single holistic criterion divided into level descriptors. Each level descriptor corresponds to a range of marks to differentiate student performance. A best-fit approach is used to ascertain which particular mark to use from the possible range for each level descriptor.

Analytic markschemes

Analytic markschemes are prepared for those examination questions that expect a particular kind of response and/or a given final answer from students. They give detailed instructions to examiners on how to break down the total mark for each question for different parts of the response.

Marking notes

For some assessment components marked using assessment criteria, marking notes are provided. Marking notes give guidance on how to apply assessment criteria to the particular requirements of a question.

Inclusive access arrangements

Inclusive access arrangements are available for students with access requirements. Standard assessment conditions may put students with assessment access requirements at a disadvantage by preventing them from demonstrating their attainment level. Inclusive access arrangements enable students to demonstrate their ability under assessment conditions that are as fair as possible.

The IB document *Access and inclusion policy* provides details of all the inclusive access arrangements available to students. The IB document *Learning diversity and inclusion in IB programmes: Removing barriers to learning* outlines the position of the IB regarding students with diverse learning needs in the IB programmes. For students affected by adverse circumstances, the publication *Diploma Programme Assessment procedures* (updated annually), which includes the general regulations, provides details on access consideration.

Responsibilities of the school

The school is required to ensure that equal access arrangements and reasonable adjustments are provided for students with learning support requirements, in line with the IB publications *Access and inclusion policy* and *Learning diversity and inclusion in IB programmes: Removing barriers to learning*.

Assessment of the extended essay

Assessment of the extended essay is a combination of:

- formative assessment, i.e. preparation for the reflection and progress form (RPF)
- summative assessment, i.e. the extended essay itself and the reflective statement on the RPF.

Generic assessment criteria are applied to all essays, whether subject-focused or interdisciplinary. Application of the criteria is informed by the subject context or interdisciplinary context of the essay.

Best-fit approach and markbands

Levels of performance are described using multiple indicators per level. In many cases, the indicators occur together throughout the essay, but not always. Also, not all indicators are always present. This means that a student can demonstrate performances that fit into different levels. To accommodate this, the IB assessment models use markbands and advise examiners and teachers to use a best-fit approach in deciding the appropriate mark for a particular criterion. From various assessment trials, we know that introducing markbands and using the best-fit model is not always self-evident, and guidance is needed to help with their application.

While the extended essay is an externally assessed component of the DP, supervisors are required to submit a predicted grade, referring to the extended essay grade descriptors as outlined in the “[Extended essay grade descriptors](#)” section in this guide. However, understanding the way in which the **criteria** are applied by examiners will assist with the guidance given to students. The following explains how **markbands** are used by examiners.

The best-fit approach and positive marking

The aim is to find the descriptor that conveys most accurately the level attained by the student’s work, using the **best-fit approach**. A best-fit approach means that adjustments will be made when a piece of work matches different aspects of a markband at different levels. The mark awarded will be one that most fairly reflects the balance of achievement against the markband. It is not necessary for every indicator of a level descriptor to be met for that mark to be rewarded. For example, if the student’s work matches two of the three requirements within a markband but one is seriously lacking, the student should be awarded for the strands that have been met well. The mark awarded should be at the lower end of the markband to compensate for what is lacking in one strand.

When assessing a student’s work, examiners take the IB approach of **positive marking**: they give credit where appropriate for what students have written, rather than looking for omissions. Examiners will read the level descriptors from the highest markband down, until they reach a descriptor that most appropriately describes the level of the work being assessed. If a piece of work seems to fall between two level descriptors, both descriptors will be read again and the one that more appropriately describes the student’s work will be chosen. There are a number of marks available within a level. Examiners will award the upper marks if the student’s work demonstrates the qualities described to a greater extent. Examiners will award the lower marks if the student’s work demonstrates those qualities to a lesser extent.

The highest level descriptors do not imply faultless performance and should be achievable by a student. Examiners will not hesitate to use the highest possible mark if they are appropriate descriptions of the work being assessed.

Extended essay assessment criteria

How the assessment criteria are applied

Examiners mark positively, giving credit where appropriate for what students have written, rather than looking for omissions. Their aim is to find the level descriptor that conveys most accurately the level attained by the student's work, using the **best-fit** approach. A best-fit approach means that compensation should be made when a piece of work matches aspects of different markbands. The mark awarded should be one that most fairly reflects the balance of achievement against the markband. It is not necessary for every indicator within a markband to be met for a mark to be awarded in that markband. **Awarding the top mark does not imply faultless performance.**

Note: Criteria A, B, C and D are applied to the extended essay as a whole. Criterion E is applied only to the reflective statement on the student's RPF.

Assessment criteria

Criterion A: Framework for the essay	Guiding question: Do the research question, research methods and structural conventions followed provide an effective framework for the essay?		
	Note: If the work does not reach a standard outlined by the performance level descriptors, 0 marks are awarded for this criterion.		
	1–2 marks	3–4 marks	5–6 marks
Research question	A research question is stated but it lacks relevance to the topic of investigation, clarity or focus.	The research question is relevant to the topic of their investigation and clear but only partially focused in relation to the scope of the essay.	The research question is relevant to the topic of investigation, clear and focused in relation to the scope of the essay.
Research methods	Research methods are used, but these are mostly unsuitable for the research question.	Research methods that are mostly suitable for the research question are explained and applied with partial effectiveness.	Research methods that are suitable for the research question are explained and applied effectively.
Structure	Structural conventions are present in the essay but these do not support communication of the research.	Structural conventions used in the essay support some aspects of the communication of the research.	Structural conventions used in the essay effectively support communication of the research.

Criterion B: Knowledge and understanding	Guiding question: Does the student demonstrate knowledge and understanding of the subject matter being used in their research?		
	Note: If the work does not reach a standard outlined by the performance level descriptors, 0 marks are awarded for this criterion.		
	1–2 marks	3–4 marks	5–6 marks
Knowledge	Research materials are used to establish knowledge of the subject matter but these materials lack relevance.	Relevant research materials are used to establish some knowledge of the subject matter.	Comprehensive, relevant research materials are used to establish knowledge of the subject matter.

Understanding — Terminology	Terminology is used but it lacks accuracy or is very limited.	Some relevant terminology is used accurately to demonstrate understanding of the subject matter.	Relevant terminology is used accurately and consistently to demonstrate understanding of the subject matter.
Understanding — Concepts	Concepts are identified but these are not relevant or are explained superficially.	Some relevant concepts are explained and used with partial effectiveness to demonstrate understanding of the subject matter.	Relevant concepts are explained and used effectively to demonstrate understanding of the subject matter.

Criterion C: Analysis and line of argument	Guiding question: Does the student analyse the information presented in the essay and produce a coherent line of argument?		
	Note: If the work does not reach a standard outlined by the performance level descriptors, 0 marks are awarded for this criterion.		
	1–2 marks	3–4 marks	5–6 marks
Analysis	The essay is descriptive rather than analytical.	The essay includes analysis that is partially effective and produces some relevant findings.	Analysis in the essay is effective and consistently produces relevant findings.
Line of argument	A partial line of argument is present.	A partially consistent line of argument links the research question, research findings and conclusions.	A clear, sustained line of argument links the research question, research findings and conclusions.

Criterion D: Discussion and evaluation	Guiding question: Does the student discuss the findings and evaluate the essay?			
	Note: If the work does not reach a standard outlined by the performance level descriptors, 0 marks are awarded for this criterion.			
	1–2 marks	3–4 marks	5–6 marks	7–8 marks
Discussion	The significance of the findings is described, but there is no reference to supporting evidence.	A partially balanced discussion of the significance of the findings is sometimes supported by appropriate evidence.	A balanced discussion of the significance of the findings is often supported by appropriate evidence.	A balanced discussion of the significance of the findings is fully supported by appropriate evidence.
Evaluation	A partial evaluation of the effectiveness of the essay is present, but strengths and limitations are not stated.	An evaluation of the effectiveness of the essay is present, with some strengths and limitations stated.	An evaluation of the effectiveness of the essay is present, with relevant strengths and limitations described.	An evaluation of the effectiveness of the essay is present, with relevant strengths and limitations explained.

Criterion E:	Guiding question: Does the student evaluate the effect of the extended essay learning experience on them as a learner?
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Reflection	Criterion E applies only to the reflective statement on the student's RPF.			
	Evidence referred to in the reflection may be drawn from, but is not limited to:			
	<ul style="list-style-type: none"> experiences and insights that could shape future thinking explicit examples of how skills learned could be used in other current contexts and in the future how changes in perspective impacted decision-making. <p>Note: If the work does not reach a standard outlined by the performance level descriptors, 0 marks are awarded for this criterion.</p>			
	1 mark	2 marks	3 marks	4 marks
Evaluative	Reflection on the extended essay learning experience is descriptive.	Reflection on the extended essay learning experience is descriptive and includes some specific examples.	Reflection on the extended essay learning experience is partially evaluative and includes specific examples.	Reflection on the extended essay learning experience is consistently evaluative and includes specific examples.
Growth	Reflection on the student's growth is limited to a description of the process and there is no evidence of transfer of learning.	Reflection sometimes shows evidence of the student's growth and transfer of learning.	Reflection often shows evidence of the student's growth and transfer of learning.	Reflection consistently shows evidence of the student's growth and transfer of learning.

Alignment with assessment objectives

Criterion	Assessment objectives	Why these assessment objectives?
A: Framework for the essay	<ul style="list-style-type: none"> Knowledge and understanding Communication of research 	<p>"Knowledge and understanding" because:</p> <ul style="list-style-type: none"> the relevance of the research question indicates knowledge and understanding knowledge and understanding of relevant research methods is evident. <p>"Communication of research" because:</p> <ul style="list-style-type: none"> research is communicated according to appropriate structural conventions.
B: Knowledge and understanding	<ul style="list-style-type: none"> Knowledge and understanding 	<p>"Knowledge and understanding" because:</p> <ul style="list-style-type: none"> research materials establish knowledge of the subject matter terminology and concepts demonstrate understanding of the subject matter.
C: Analysis and line of argument	<ul style="list-style-type: none"> Application and analysis Synthesis and evaluation 	<p>"Application and analysis" because:</p> <ul style="list-style-type: none"> appropriate analysis is used to determine relevant findings. <p>"Synthesis and evaluation" because:</p> <ul style="list-style-type: none"> a line of argument links the research question, research findings and conclusions.

Criterion	Assessment objectives	Why these assessment objectives?
D: Discussion and evaluation	<ul style="list-style-type: none"> Synthesis and evaluation 	<p>“Synthesis and evaluation” because:</p> <ul style="list-style-type: none"> there is a balanced discussion of the significance of the findings the effectiveness of the essay is evaluated.
E: Reflection	<ul style="list-style-type: none"> Synthesis and evaluation 	<p>“Synthesis and evaluation” because:</p> <ul style="list-style-type: none"> the extended essay learning experience is evaluated and the student’s growth reflected on.

Extended essay grade descriptors

The extended essay is externally assessed and, as such, supervisors are not expected to mark the essays or arrive at a number to translate into a grade. Predicted grades for the extended essay should be based on the qualitative grade descriptors for the extended essay presented below.

These descriptors will be used by senior examiners to set the boundaries. While boundaries are subject to change, it is the grade descriptors that remain consistent. Please refer to the document [Assessment principles and practices—Quality assessments in a digital age](#).

Grade A
<ul style="list-style-type: none"> The student demonstrates effective research skills, resulting in a well-focused and appropriate research question that can be explored within the scope of the chosen topic. There is effective engagement with relevant research areas, methods and sources. There is excellent knowledge and understanding of the topic in the wider context of the relevant discipline. There is effective application of source material and correct use of subject-specific terminology and/or concepts that further supports this. Conclusions are consistent, relevant and proficiently analysed. Arguments show sustained reason and are supported effectively by evidence. Research is critically evaluated. Coherence, consistency and effective use of structural conventions support readability to an excellent degree. Reflection on the extended essay learning experience is consistently evaluative and includes specific examples. Reflection shows consistent evidence of the student’s growth and transfer of learning.
Grade B
<ul style="list-style-type: none"> The student demonstrates appropriate research skills, resulting in a research question that can be explored within the scope of the chosen topic. There is reasonably effective engagement with relevant research areas, methods and sources. There is good knowledge and understanding of the topic in the wider context of the relevant discipline. There is a reasonably effective application of source material and reasonable use of subject-specific terminology and/or concepts. Conclusions are consistent and accurately analysed. Arguments show reason and are often supported by evidence. Research at times shows critical evaluation.

<ul style="list-style-type: none"> • Coherence, consistency and use of structural conventions support readability to a good degree. • Reflection on the extended essay learning experience is partially evaluative and includes specific examples. • Reflection often shows evidence of the student's growth and transfer of learning.
Grade C
<ul style="list-style-type: none"> • The student demonstrates evidence of research undertaken, leading to a research question that is not necessarily expressed in a way that can be explored within the scope of the chosen topic. • There is 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. • There is some knowledge and understanding of the topic in the wider context of the discipline, and the knowledge is mostly relevant. • There is an attempted application of source material and appropriate terminology and/or concepts; an attempted synthesis of research results with partially relevant analysis. • Conclusions are partly supported by the evidence. • Arguments are descriptive rather than analytical. • There is a partially successful evaluation of the research. • The essay is not always coherent and consistent, and structural conventions are irregularly applied, but this does not significantly hinder readability. • Reflection on the extended essay learning experience is descriptive and includes some specific examples. • Reflection sometimes shows evidence of the student's growth and transfer of learning.
Grade D
<ul style="list-style-type: none"> • The student 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, there is engagement with appropriate research, methods and sources, but discrepancies in those processes occasionally interfere with the planning and approach. • There is some relevant knowledge and understanding of the topic in the wider context of the discipline but at times the knowledge is irrelevant. • There is an attempted application of source material but with inaccuracies in the use of, or underuse of, terminology and/or concepts. • There is irrelevant analysis and inconsistent conclusions as a result of a descriptive discussion. • There is a lack of evaluation. • The limited coherence and consistency of the essay and absence of structural conventions hinders readability. • Reflection on the extended essay learning experience is descriptive. • Reflection on the student's growth is limited to a description of the process and there is no evidence of transfer of learning.
Grade E (a failing condition)
<ul style="list-style-type: none"> • The student demonstrates little or no research, a lack of focus and an ineffective research question. • There is a generally unsystematic approach and a resulting unfocused research question. • There is limited engagement with limited research and sources. • There is generally limited and only partially accurate knowledge and understanding of the topic in the wider context of the discipline. • There are ineffective connections in the application of source material, and inaccuracies in the terminology and/or concepts used.

- The results of research are summarized with inconsistent analysis.
- There is an attempted outline of an argument but one that is generally descriptive in nature.
- The lack of coherence and consistency and absence of structural conventions significantly hinders readability.
- Reflection on the extended essay learning experience is very limited, with no evidence of transfer of learning.

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Updates to the publication

This section outlines the updates made to this publication over the past two years. The changes are ordered from the most recent to the oldest updates. Minor spelling and typographical corrections are not listed.

Changes for November 2025

Extended essay pathways > Overview of extended essay pathways

“The interdisciplinary pathway”

Introduction of revised or improved content.

Minor wording edits have been made to the introductory text of this section of the guide in order to clarify the allowable languages of submission for interdisciplinary essays.

Changes for August 2025

The extended essay in an IB context > The core of the Diploma Programme model

“Coherence in the core”

Introduction of revised or improved content.

Minor wording edits have been made to this section of the guide in order to ensure cross-programme coherence. The phrase “concurrency of learning” has been removed from the bulleted list in this section, and the phrase “the IB learning progression and the IB learner profile” has been replaced with “the IB learner profile and other elements of an IB education”.

The extended essay in an IB context > The extended essay and the IB continuum

Introduction of revised or improved content.

The title of this section has been changed from “The extended essay in IB learning progression” to “The extended essay and the IB continuum”.

Additional instances of the phrase “learning progression” in this section have also been replaced with “continuum” and “learning”.

The extended essay in an IB context > Approaches to learning and approaches to teaching in the DP

Introduction of revised or improved content.

The phrase “concurrency of learning” has been removed from the third bullet point in this section.

Extended essay pathways > Subject-specific guidance

“Individuals and societies”

Introduction of revised or improved content.

Reference to “primary sources” was changed to “possible sources” in one of the example approaches to an extended essay in digital society.

Changes for May 2025

Extended essay pathways > Generic guidance for the extended essay

“Criterion A: Framework for the essay”

Introduction of revised or improved content.

A change was made to clarify the intention of the term “research methods”: “For the extended essay, the understanding of ‘research methods’ is necessarily broad, to cover the contexts of all subjects, including instances where students are limited to using ‘literature review’ as their tool.”

“Criterion D: Discussion and evaluation”

Introduction of revised or improved content.

A change was made to clarify the intention of the term “evaluation”: “The intention is not to have a separate ‘evaluation’ section, but rather to integrate it throughout your essay.”

Extended essay pathways > Subject-specific guidance

“What is distinctive about an extended essay in language A?”

Introduction of revised or improved content.

A change was made to the language A-specific guidance to affirm the inclusion of language-based essays: “a study of a single literary or language text, originally written in the language in which the essay is written”.

“Choosing a topic”

Introduction of revised or improved content.

The description of the topic choice was changed from requiring a focus on a “literary analysis” to a “literature- or language-based analysis”.

“Researching and writing your essay”

Introduction of revised or improved content.

The final sentence of the first paragraph now reads: “You must integrate into your essay a review of the existing literature on your topic, thereby demonstrating knowledge and understanding.”

“Considering the assessment criteria”

Introduction of revised or improved content.

For criterion B, the example bullet point for drama now reads: “If you are writing on drama, you might consider the role of stage directions, props and sound effects (the ‘plastics’ of theatre).”

“What is distinctive about an extended essay in the sciences?”

Introduction of revised or improved content.

Changes were made to the sciences-specific guidance to better position essays written using secondary data. At the end of the first paragraph, the final sentence now reads: “Your findings must lead to a valid, evidence-based conclusion.”

The second paragraph now reads: “Science essays can be characterized by the development of hypotheses, replicable data and the use of peer-reviewed publications. These three processes differentiate a scientific process from a pseudoscientific one.”

“Example topics, research questions and approaches”

Removal of out-of-date or incorrect content.

In the table for “Theatre”, the following sentence has been deleted: “Extensive and repeated visits to the theatre are required.”

“What is distinctive about an extended essay in cross-disciplinary subjects?”

Correction of error in the previous version.

Changes were made to confirm that ESS and literature and performance may not be used in combination with another DP subject in the interdisciplinary pathway: “ESS or literature and performance may not be used in combination with another DP subject in the interdisciplinary pathway. This is to avoid the complexity and potential challenges of integrating more than two disciplinary perspectives.”

Researching and writing the extended essay > Writing your extended essay

“Word counts”

Introduction of revised or improved content.

Reference to the “final draft” was changed to the “full draft”.

Researching and writing the extended essay > The ethical researcher

“Academic integrity”

Introduction of revised or improved content.

Reference to the “final draft” was changed to the “full draft”.