



International Baccalaureate®
Baccalauréat International
Bachillerato Internacional

INTERNATIONAL BACCALAUREATE
DIPLOMA PROGRAMME



TOK HANDBOOK

2020-22

THEORY OF KNOWLEDGE

REVIEWED IN MAY 2018

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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 inter-cultural 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 life-long learners who understand that other people, with their differences, can also be right.

Sanskar Mission Statement

Sanskar School aims to:

- Equip its pupil with a critical and global outlook which will make them committed citizens of the world.
- Recognize and channelize the potential of the pupil and develop thinking, communication, social, scientific and inter-personal skills.
- Foster cognitive, affective and psycho-motor development and enable the pupil to make connections with the acquired knowledge in his/her everyday life.

IBO LEARNER PROFILE



Resource:
www.ibo.org

IB LEARNER PROFILE

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

IB learners of TOK strive to be:

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| <p>Inquirer</p>  <p>I ask questions to learn about many things.</p> | <p>They develop themselves into active and independent learners for life time.</p> |
| <p>Knowledgeable</p>  <p>I try to learn many things.</p> | <p>They acquire in depth knowledge and understanding by solving local and global issues.</p> |

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| <h1>Thinker</h1>  <p>I try to connect things I know</p> | <p>They use their critical and creative thinking skills to solve problems.</p> |
| <h1>Communicator</h1>  <p>I share my ideas with others.</p> | <p>They are confident and effective in expressing their ideas in multiple languages.</p> |
| <h1>Principled</h1>  <p>I try to do what is right</p> | <p>They grow to become responsible, accountable, fair and honest individuals.</p> |
| <h1>Open-minded</h1>  <p>I accept other points of view</p> | <p>They learn and grow from diverse cultures, giving respect to the perspectives of people not belonging to their cultures or thoughts.</p> |

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| <h1>Caring</h1>  <p>I try to help where I can.</p> | <p>They empathize with others and try to bring a positive change in their lives.</p> |
| <h1>Risk-Taker</h1>  <p>I try new things!</p> | <p>They learn how to handle an unknown and unplanned situation in a confident and strategic manner.</p> |
| <h1>Balanced</h1>  <p>I work and play hard.</p> | <p>They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.</p> |
| <h1>Reflective</h1>  <p>I think about how I can improve.</p> | <p>They are able to consider their strengths and limitations in order to support personal development.</p> |

THEORY OF KNOWLEDGE:

- Theory of knowledge is unlike other Diploma courses, and probably unlike anything you have done before in school.
- TOK is all about wondering.
- It is unique in the sense that it draws together all the knowledge learned in other courses and questions the validity of what we think we know.
- It helps the students to discover the richness of knowledge, and helps them to examine how knowledge is built up, examined, and evaluated by individuals and societies.
- To make us understand the way we learn.
- To make us understand that there are multiple ways of learning.
- To reinforce the idea that there are many different ways of thinking and perspectives, and assumptions we have because our cultural and individual positions may obscure the way we see the world.
- To suggest some of the responsibilities that may come with knowledge.
- The TOK course is designed as a comprehensive two-year curriculum.
- It allows the students to meet the requirements of different national educational institutions.
- Theory of Knowledge plays an important part in the IB Diploma Programme by providing an opportunity for the students to reflect on knowledge.
- During the TOK discussions links may be made between knowledge gained in other subjects.
- The core of TOK is Knowledge questions.

- Discussions form the backbone of TOK, where students will collaborate to develop and evaluate knowledge.

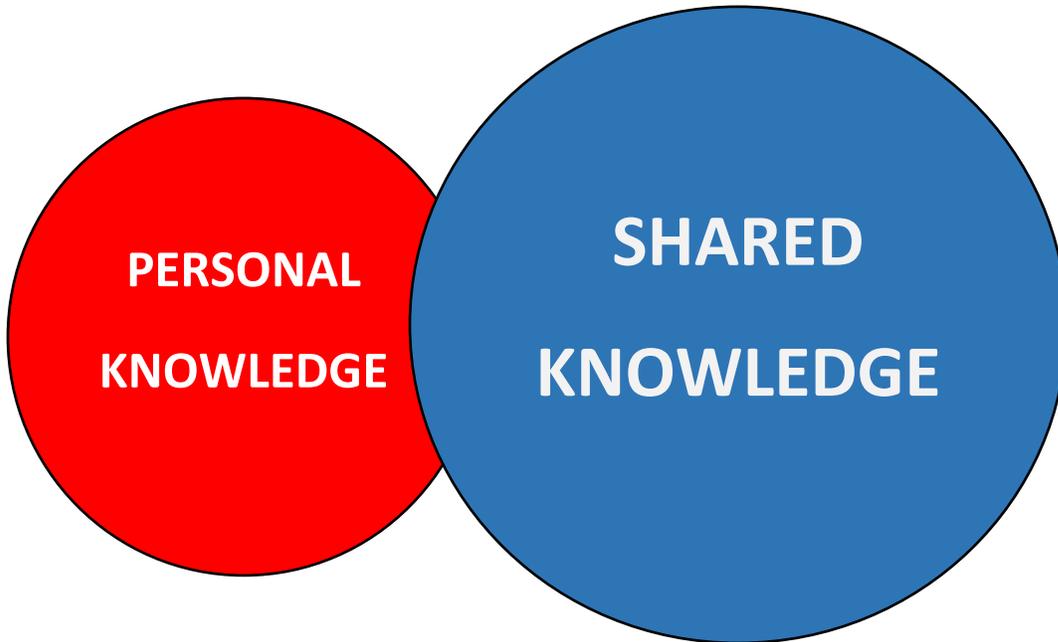
ESSENTIAL QUESTIONS OF TOK

- What does the concept of knowledge imply?
- How does knowledge develop?
- What are the limitations of human cognitive abilities, the ways of knowing and the knowledge itself?
- What is the knowledgeable personality like?

WHAT IS KNOWLEDGE?

- We use the word “know” all the time, but what does it mean?
- We feel that we know a concept, but providing a more rigorous analysis of it is difficult.
- According to Plato, Knowledge is justified, true belief.
- According to Wikipedia, Knowledge is familiarity with someone or something, which can include facts, information, descriptions, or skills acquired through experience or education.

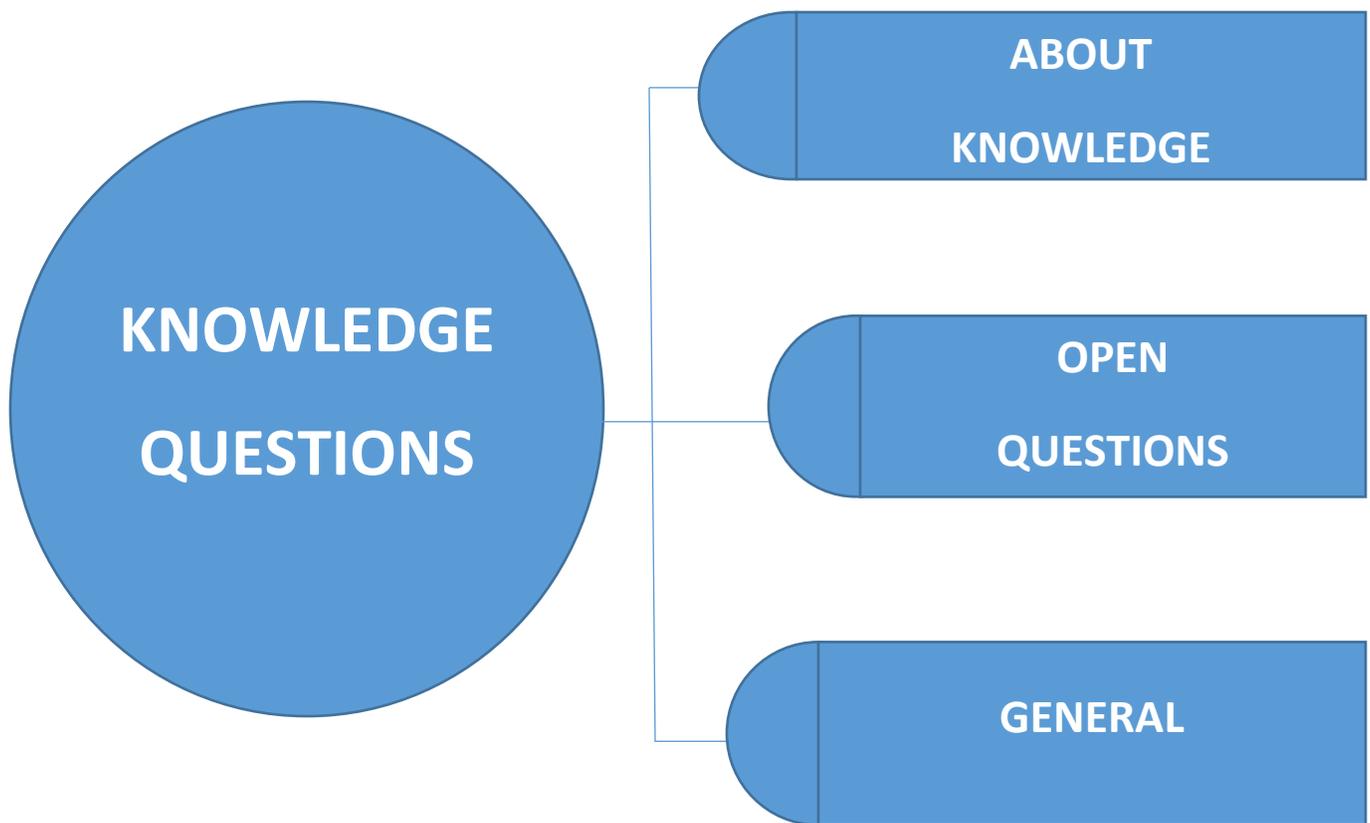
KNOWLEDGE FRAMEWORK



TYPES OF KNOWLEDGE

- Knowledge can be perceived as a production of work of an individual or of a group of people.
- TOK in IB differentiates knowledge as Personal Knowledge and Shared Knowledge.
- Personal knowledge depends on the experiences of a particular individual gained through experience, practice and personal involvement.
- Shared knowledge is systematic in its nature and is the product of one or more individuals.
- TOK must maintain a balance between Shared and Personal Knowledge.

KNOWLEDGE QUESTIONS



- Knowledge questions are questions about knowledge.
- They focus on how knowledge is constructed and evaluated.
- They are open in nature and have many right answers to them.
- Should be expressed in general terms rather than subject specific terms.

The TOK course “at a glance”

The TOK course provides students with an opportunity to explore and reflect on the nature of knowledge and the process of knowing. It is a core element of the DP to which schools are required to devote at least 100 hours of class time.

In TOK, students reflect on the knowledge, beliefs and opinions that they have built up from their years of academic studies and their lives outside the classroom. The course is intended to be challenging and thought-provoking—as well as empowering—for students.

The course centres on the exploration of knowledge questions, which are a key tool for both teachers and students. These are contestable questions about knowledge itself, such as: “What counts as good evidence for a claim?”, “Are some types of knowledge less open to interpretation than others?”, or “What constraints should there be on the pursuit of knowledge?”. While these questions may initially seem slightly intimidating, they become much more accessible when considered with reference to specific examples within the TOK course.

The TOK curriculum is made up of three deeply interconnected parts.

The core theme—

- **Knowledge and the knower:** This theme encourage students to reflect on themselves as knowers and thinkers, and to consider the different communities of knowers to which we belong.
- **Optional themes:** This element provides an opportunity to take a more in-depth look at two themes of particular interest to teachers and students. The given themes all have a significant impact on the world today and play a key role in shaping people’s perspectives and identities. Teachers select two optional themes from a choice of five: knowledge and technology; knowledge and language; knowledge and politics; knowledge and religion; and knowledge and indigenous societies.

- **Areas of knowledge:** The areas of knowledge (AOK) are specific branches of knowledge, each of which can be seen to have a distinct nature and sometimes use different methods of gaining knowledge. In TOK, students explore five compulsory areas of knowledge: **History; The Human Sciences; The Natural Sciences; Mathematics; and The Arts.**

There are two assessment tasks in the TOK course.

- **The TOK Exhibition** assesses the ability of the student to show how TOK manifests in the world around us. The exhibition is an internal assessment component; it is marked by the teacher and is externally moderated by the IB.
- **The TOK Essay** engages students in a more formal and sustained piece of writing in response to a title focused on the areas of knowledge. The essay is an external assessment component; it is marked by IB examiners. The essay must be a maximum of 1,600 words and must be on one of the six prescribed titles issued by the IB for each examination session.

The aims of the TOK course are:

- to encourage students to reflect on the central question, “How do we know that?”, and to recognize the value of asking that question
- to expose students to ambiguity, uncertainty and questions with multiple plausible answers
- to equip students to effectively navigate and make sense of the world, and help prepare them to encounter novel and complex situations
- to encourage students to be more aware of their own perspectives and to reflect critically on their own beliefs and assumptions
- to engage students with multiple perspectives, foster open-mindedness and develop intercultural understanding

- to encourage students to make connections between academic disciplines by exploring underlying concepts and by identifying similarities and differences in the methods of inquiry used in different areas of knowledge
- to prompt students to consider the importance of values, responsibilities and ethical concerns relating to the production, acquisition, application and communication of knowledge.

Assessment objectives

Having completed the TOK course, students should be able to:

- demonstrate TOK thinking through the critical examination of knowledge questions
- identify and explore links between knowledge questions and the world around us
- identify and explore links between knowledge questions and areas of knowledge
- develop relevant, clear and coherent arguments
- use examples and evidence effectively to support a discussion
- demonstrate awareness and evaluation of different points of view
- consider the implications of arguments and conclusions.

Optional themes

The optional themes allow for a more in-depth look at two themes that are of particular interest to the TOK teacher and students.

- **Knowledge and technology**
- **Knowledge and language**
- **Knowledge and politics**

- **Knowledge and religion**
- **Knowledge and indigenous societies**

These five themes have been selected because of their contemporary real-world relevance and their rich potential to stimulate interesting and engaging TOK discussions around key areas, such as the justification of, and evidence for, claims.

It is intended that all five of these optional themes will have strong links to, and extend from, the core theme—Knowledge and the knower. Whereas the core theme focuses on the student and the particular communities of knowers that they belong to, the optional themes broaden the focus to five factors that have a huge impact on the world today and that play a particularly key role in shaping people’s perspectives and identities. They raise issues that students are likely to encounter in their lives both within and, importantly, beyond their school experiences.

The following sections contain guidance on each of these five optional themes. It should be noted that the themes allow for a great deal of flexibility in how they are approached. There is opportunity for teachers to explore a wide range of concepts and issues, and to provide a wide variety of engaging examples. However, for each of the optional themes selected for study, teachers must ensure that the focus remains clearly on knowledge in that theme, and that they engage with the four compulsory elements required in every part of the syllabus: **scope, perspectives, methods and tools, and ethics.**

Knowledge and technology

For many, advances in technology have provided easy access to massive amounts of data and information, and have facilitated unprecedented levels of global interaction. However, they have also raised important questions about how we engage with, and understand, information; about our understanding of the world; and about our understanding of ourselves.

This optional theme focuses on issues relating to the impact of technology on knowledge and knowers, and how technology helps and hinders our pursuit of

knowledge. It examines the ways that technology can be seen to shape knowledge creation, knowledge sharing and exchange, and even the nature of knowledge itself.

This theme provides an opportunity for students to engage with highly topical and engaging issues, such as those relating to the impact of artificial intelligence on knowledge and knowing. For example, there could be discussion of whether humans are needed to create new knowledge; whether machines can know, think or learn; or whether a knower is always human.

It also provides excellent opportunities for discussions of ethical and power issues relating to emerging technologies. For example, students could consider examples relating to biometric data, or situations where people are unaware that their personal data is being collected. As in all elements of the course, it is crucial that these discussions focus explicitly on the knowledge questions that are woven into these discussions, rather than debating the ethical issues themselves. For example, students could consider the example of driverless cars—as a 21st-century variation on the “trolley problem”—as a way to identify issues about the assumptions that underpin, and the criteria we use to make, our moral decisions.

Social networks are another rich source of examples that could be discussed in this theme. For example, there could be discussion of the impact of social networks on knowledge sharing, or of whether social networks create “echo chambers” that reinforce existing perspectives rather than boosting engagement with diverse perspectives.

In addition to examples arising from the “information age”, this theme also provides an opportunity for discussion of the impact of historical technological developments on knowledge and knowing. For example, students could consider the impact of developments such as mass printing or machine translation on access to knowledge. They could also consider the impact of technological developments such as advances in navigational instruments and map-making, or developments in air travel, and how these have had an impact on the transmission of knowledge and have allowed us to gain greater knowledge of different places and cultures.

It is crucial that discussions within this optional theme stay focused explicitly on knowledge rather than consisting of general discussions about technology.

Knowledge and language

Language is an essential part of our daily lives, with most of our knowledge coming to us linguistically encoded. It plays an important role in communicating and sharing knowledge and has a significant impact on the way that we experience the world. However, some see language as having an even more central role, arguing that language doesn't just describe our experiences of the world but, in fact, actually structures those experiences, limiting and shaping what we know.

This theme provides an opportunity for students to reflect on the role that language plays in our lives, and the influence it has on thought and behaviour. It also encourages students to draw on their personal experience of language-learning as part of their DP studies. For example, students could reflect on what knowledge of a language consists of, and how that is similar to, or different from, other forms of knowledge. They could also consider the extent to which how we know and what we know is dependent on, and differs according to, the language that we use.

This theme encourages students to reflect on the role of language in allowing knowledge to be shared with others. Language plays a key role in the communication and dissemination of knowledge; it also enables knowledge to be accumulated for, and passed down to, future generations. Language is also key to how claims are exposed to public scrutiny; it enables what we think to be communicated, debated, confirmed or refuted. These characteristics provide extremely rich material for TOK discussions.

One interesting focus for discussions in this theme could be language and power. For example, students could consider the role of language in sustaining relationships of authority by considering how control of written language can create or reinforce power structures, or by considering the way that we change our language depending on who we are speaking to. They could also consider the

role of language in creating and reinforcing distinctions of class, ethnicity and gender.

Another interesting example that could be discussed in this theme is non-human communication. For example, students could explore how technological developments have affected the ways that language is used and the ways that communication takes place, or the nature and qualities of “machine language”. This could also include wider discussion of what qualities and features other forms of communication, such as animal communication, might need to have in order to be considered a language.

It is crucial that discussions within this optional theme stay focused explicitly on knowledge rather than consisting of general discussions about language.

Knowledge and politics

Knowledge itself has an intrinsically political dimension, as questions about how knowledge is constructed, used and disseminated are infused with issues relating to power and politics. Political issues and decisions also affect our daily lives in many different ways.

This theme provides an opportunity for discussions about the practice of politics and our everyday interactions with politics in the world around us. For example, this theme is intended to provide an opportunity to engage with high-profile contemporary debates and examples, such as those around “fake news” and “post-truth politics”. It considers where our political views and values come from, and how these inform and influence other areas of our lives. It encourages students to consider the role and origin of their own political beliefs and positions, as well as exploring issues relating to how groups make decisions that affect large numbers of people.

Another key focus of this theme is the “politics of knowledge” and issues around knowledge, power and oppression. This could, for example, include discussion of the concept of “epistemic injustice” and situations where someone’s knowledge or expertise may be dismissed because they are a member of a particular social

group. It could also include exploration of examples relating to the control of knowledge; for example, cases where political leaders and groups (such as the Khmer Rouge in Cambodia) have attempted to eradicate specific bodies of knowledge, “rewrite” history or persecute educated elites.

Within this theme, there could be discussions around the impact of technology and the potential of new technologies to give political actors new powers. For example, students could consider the increasing focus on data analytics in shaping political policies and decision-making. They could also consider the impact of social media on political discussion, or the challenges of reducing complex political issues into media-friendly “sound bites”.

Another interesting possible area of discussion could be around persuasion, manipulation, misinformation and propaganda. This could include discussion of examples where facts and knowledge have been systematically distorted for political gain, or where political actors have denied or subverted knowledge. It could also lead to a discussion of the differences between political rhetoric and propaganda, as well as interesting reflections on the role of think tanks, pressure groups, political activists, funded research and fact checkers.

Knowledge and religion

For many people, religion has a major impact on how they understand the world. It permeates their thinking and influences their understanding of other areas, providing a backdrop to all of the other knowledge they possess. Religions themselves also generate specific claims about knowledge, as well as competing assertions and interpretations.

This theme provides an opportunity for students to think carefully, critically and respectfully about knowledge and religion, and to reflect on the significant impact that religion has on how we view the world. Religion is often regarded as a sensitive area in which discussions should be had with caution, in part because people have very personal and deeply held convictions regarding religious matters. Yet many of the features that make religion such a contentious topic are

exactly the features that make it highly engaging for students and hugely relevant for a course such as TOK.

Religion provides rich ground for TOK discussions as religions are often complex systems of beliefs, practices, assumptions and values. Religions also raise interesting issues around the exchange of knowledge between individuals and groups. Within their discussions in this theme, students are encouraged to consider the diversity of perspectives within individual religions as well as across different religions; for example, considering fundamentalist, conservative and liberal perspectives within Christianity.

An example of a particularly interesting area of discussion in relation to this theme concerns the concept of evidence. Critics often argue that religions lack convincing evidence to support their claims and beliefs. However, others argue that criticism surrounding the evidence for religious claims is misplaced, arguing that religious knowledge is an example of a kind of knowledge that is not based on empirical evidence. Indeed, in some traditions belief that is not based on evidence is seen as superior to belief that is based on evidence, as the demand for concrete evidence is seen to signify a lack of faith or a misunderstanding of the nature of religion.

Another interesting area to consider could be the relationship between religion and morality, and whether religion and ethics are inextricably linked. For example, students could consider whether religion provides a way to systematize concepts of right and wrong, or whether religious claims carry any particular obligation or responsibility for the knower.

It is crucial that discussions within this optional theme stay focused explicitly on knowledge rather than consisting of general discussions about religion.

Knowledge and indigenous societies

In recent years there has been increasing global awareness of the historic and ongoing injustices that many groups of indigenous peoples have faced, and of how threats to indigenous societies can lead to a loss of traditional knowledge

and cultural diversity. For example, in 2007 the UN adopted the “United Nations Declaration on the Rights of Indigenous Peoples”, which includes the statement that “Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures”.

This optional theme provides an opportunity to undertake a more detailed exploration of knowledge that is principally bound to a particular group, culture or society. It focuses on knowledge that is deeply embedded in the culture and traditions of particular communities of knowers, and how what might be seen as “traditional” indigenous knowledge and societies operate today.

In their discussions in this theme, it is important that students are encouraged to reflect critically on the category “indigenous societies” itself. For example, this could consist of discussion of the history and context of the emergence of the word “indigenous” and its contested meanings. It could also include discussion of the power relations that influence hierarchies of how knowledge is classified and validated.

Students should be encouraged to consider the diversity of indigenous societies, as well as the diversity within these societies, and to avoid the assumption that all members of a particular culture or society will share exactly the same outlook and values. Students should also be encouraged to engage with specific examples rather than generalizations; for example, they could explore the impact of the building of the Ok Tedi mine on the Wopkaimin people of Papua New Guinea, or the importance of music and traditional craftsmanship to the Namaqua people of Southern Africa.

This theme provides an opportunity for discussion of areas such as the focus in many indigenous societies on a holistic view of knowledge, and on the particularly long-standing and close relationships between many indigenous societies and the natural world. It provides an opportunity for rich conversations around examples such as the embodiment and transmission of knowledge in traditional artistic and cultural practices, rituals and objects.

Another interesting area of discussion within this theme could be the impact and legacy of colonialism on indigenous societies, or how external influences, such as globalization, have brought about changes and challenges in relation to the ownership and custodianship of knowledge in indigenous societies. There could be discussion of how some kinds of knowledge have often been devalued; for example, through an emphasis on the primacy of science, or the viewing of oral tradition as inferior to the written word.

It is crucial that discussions within this optional theme stay focused explicitly on knowledge rather than consisting of general discussions about indigenous societies.

Areas of knowledge

Areas of knowledge are structures within which much human knowledge is organized. In these areas there are often socially established methods for producing knowledge, as well as norms for what counts as a fact or a good explanation.

Students are required to study all five of the following areas of knowledge.

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|-------------------------|--|
| MATHEMATICS | |
| NATURAL SCIENCES | |
| HUMAN SCIENCES | |
| HISTORY | |
| ARTS | |

Within their discussions, students should be encouraged to think about, and draw examples from, specific individual academic disciplines that are included within the different areas of knowledge.

The following sections contain guidance and examples of knowledge questions for each of these five compulsory areas of knowledge. These are suggestions only and should not be taken as prescriptive or exhaustive. However, teachers must ensure that the focus remains clearly on knowledge in that area, and that they engage with the four compulsory elements required in every part of the syllabus: scope, perspectives, methods and tools and ethics.

Making comparisons across areas of knowledge

TOK discussions should explore the different areas of knowledge to deepen students' understanding of what it is that gives each area its character. Crucially, a key focus should then also be on encouraging students to make comparisons and connections across the areas of knowledge.

The “knowledge framework” is intended to help support comparisons across areas of knowledge. These four elements provide a useful vocabulary for making effective comparisons. For example, within “perspectives” students could compare how knowledge changes over time in the different areas of knowledge. Although knowledge in these areas is often highly structured and systematic in nature, it also changes and evolves over time. These changes may be slow and incremental, as areas of knowledge often possess a certain stability. However, changes can also be more sudden and dramatic shifts as an area of knowledge responds to, for example, new experimental results, advances in underlying theories or changes in technology.

It is important to note that comparing and contrasting the various areas of knowledge involves not only exploring features that they have in common, but also examining their differences. Comparison of different areas of knowledge is also an evaluative task, as opposed to being simply descriptive. It involves critical appraisal of similarities and differences between the areas of knowledge, rather than simply their identification.

History

Studying history involves exploration and inquiry into the past. This raises questions about whether it is possible to talk meaningfully about a historical fact, or how far we can speak with certainty about anything in the past.

History provides particularly interesting material for TOK discussions because of the challenges presented by not being able to directly observe the past, and because the historian is unable to utilize some of the methods of inquiry that are used in other areas of knowledge. Studying history can also promote empathy with, and understanding of, people living in diverse places and at different times. These characteristics open up many interesting issues and questions that are unique, or particularly pertinent, to history as an area of knowledge.

As we cannot directly observe historical events, documentary evidence plays a vital role in helping historians to understand and interpret the past. This raises questions about the reliability of that evidence, particularly given that historical sources are often incomplete and that different sources can corroborate, complement or contradict each other.

In addition to being heavily evidence-based, history is also an interpretive discipline that allows for multiple perspectives and opinions. Students could be encouraged to consider the role and importance of historians, particularly in terms of why their interpretations may differ or how we evaluate conflicting interpretations of past events. Students could also consider why some might claim that there is always a subjective element in historical writing because historians are influenced by the historical and social environment in which they are writing—which unavoidably affects their selection and interpretation of evidence.

An interesting focus for discussions could be the concept of historical significance. For example, students could consider why particular aspects of history have been

recorded and preserved whereas others have been lost or excluded from historical accounts. They could also consider the way that history is sometimes used to promote a particular dominant perspective or consider how specific groups, such as minorities or women, may have experienced events in the past differently. This could connect to reflection on recent controversies surrounding the historical events taught, and history textbooks used, in high school history lessons in various countries around the world. This could include how different textbooks can sometimes tell different versions of history.

The Human Sciences

The human sciences include a diverse range of disciplines, such as psychology, social and cultural anthropology, economics, political science, and geography. These disciplines share a common focus on the study of human existence and behaviour.

The diversity of the disciplines included within the human sciences can itself be a stimulus for interesting TOK discussions, as can the coexistence of different approaches within a single discipline (for example psychodynamic versus behaviourist versus humanistic approaches in psychology).

One interesting focus for discussion could be, for example, whether there are fundamental differences between the human sciences and the natural sciences in terms of how they interpret the word “science”, the methods they use for collecting data, or how they test the validity and reliability of hypotheses.

Another interesting focus for discussion could be the use of questionnaires and polls in the human sciences. This could include whether the results of questionnaires can be reliable given the challenges around neutral language, leading questions, or sampling and selection effect. It could also include discussion of issues relating to respondents not being truthful or deliberately giving misleading responses.

Students could also be encouraged to consider the ways in which social, political, cultural or financial factors may affect the types of research that are supported

and financed in the human sciences. For example, market research is often undertaken as a way for companies to increase their profits, and social science research sometimes seeks to influence public policy. This can raise interesting questions about the purpose and context within which knowledge is pursued in the human sciences.

The Natural Sciences

The natural sciences are often seen to rely on evidence, rationality and the quest for deeper understanding. Observation and experimentation play a key role, and terms such as “theory” have a special meaning in the natural sciences compared to how they are used in daily life and in other areas of knowledge.

A focus for discussions of the natural sciences could be what differentiates the scientific from the non-scientific or “pseudo-scientific”. Many people would suggest that it is the methods used in the natural sciences that is the key distinguishing factor—which raises the question of what it is about these methods that means that the knowledge they generate is often regarded as being highly reliable. Students could also consider whether the word “science” means different things in different languages, or whether it has been used differently in different periods of history.

Another interesting focus for discussions could be scientific development, revolutions and paradigm shifts. This could include what is meant by a paradigm shift, whether scientific knowledge has always grown, or how technological developments have driven scientific progress and discoveries. It could also include reflection on whether we could ever reach a point where everything important to the natural sciences is known.

Students could also consider the role of consensus in the natural sciences, and the role and importance of the “scientific community”. For example, they could consider the role of peer review as a method of scrutinizing scientific claims and the extent to which this is an effective and objective form of self-regulation. This could lead to discussions of whether or not scientific knowledge is, or should be, amenable to public scrutiny. It could also lead to wider reflection on whether

there are commonly agreed values, methodologies and assumptions about knowledge that underpin all scientific inquiry.

Another rich source of material for TOK discussions relating to the natural sciences can come from the issue of funding. A great deal of scientific research is funded by private for-profit companies and by governments, which raises interesting questions around how the priorities for funding scientific research are determined and who it is that determines which research directions are pursued.

The Arts

“The Arts” is used in TOK to include a diverse range of disciplines such as visual arts, theatre, dance, music, film and literature. The forms and methods of these disciplines are often dissimilar, so the diversity within this single area of knowledge can itself be an excellent stimulus for TOK discussions.

The arts provide rich material for discussions of concepts such as interpretation. For example, students could consider how we ascribe meaning to works of art, or whether the intention of the artist is what determines meaning. During these discussions, students could be encouraged to draw on their experiences from their DP studies in language and literature classes, where they are required to understand and interpret a range of texts.

Students could also consider the role of the audience in the arts. This could include, for example, whether art requires a response from, or an emotional interaction with, an audience. It could also include the role of critics and experts, and whether everyone is an equally competent judge in the arts.

Another interesting focus for discussions could be the social character and function of the arts. This could include the way that the arts are often seen as helping to shed light on fundamental questions about the human condition, or how the arts are often regarded as having an important function as a medium for social criticism and a vehicle for social change.

Discussions of the arts could also focus on exploring whether there are, or should be, limits to what is acceptable in art. Students could consider examples of

controversial works of art, such as Marco Evaristti's Helena or Sruli Recht's Forget Me Knot, considering whether there should be ethical constraints on the pursuit of knowledge in the arts, or whether artists or audiences have any particular ethical responsibilities.

Another focus for discussions could be the relationship between arts and culture. Students could explore art forms and art works that are strongly rooted in a particular culture or tradition, as well as reflecting on the diversity of the arts across time, cultures and contexts. Students could also explore examples of "outsider art" as a way to stimulate conversations about the potential for art to challenge established values.

Mathematics

Mathematics is sometimes seen to have a degree of certainty that is unmatched by other areas of knowledge or is seen to be founded on a set of more or less universally accepted definitions and basic assumptions. This makes mathematics an excellent source of material for TOK discussions.

One interesting focus for discussions could be the status of mathematics as an area of knowledge. Students could consider why disciplines in the human sciences are often keen to cast their conclusions in mathematical terms, or why mathematical treatments of a topic are often taken by many to be a sign of intellectual rigour. They could also consider why mathematics is often given a privileged position in many education systems.

Another rich source of material for TOK discussions can be the role of creativity, imagination, beauty and elegance in mathematics. Despite, or perhaps because of, the strict confines of mathematical logic, mathematics can be an enormously creative subject, asking its practitioners to make great leaps of imagination. This could lead to discussion of whether, or why, elegance and beauty should be relevant to mathematical value.

Another interesting focus could be the relationship between mathematics and the world around us. Mathematics is often used to model real-world processes. Yet,

in some ways, mathematics can also seem quite abstract and detached from the real world, strongly focused on the application of reason rather than relying on experience and observation of the world.

Students could also consider the role and significance of proof in mathematics, and how this relates to concepts such as truth. They could reflect on whether the term “proof” is used differently in mathematics compared to how it is used in our everyday lives or in other areas of knowledge.

TOK assessment outline

Theory of knowledge: First assessment 2022

| Assessment component | Weighting |
|---|-------------------------|
| <p>Internal assessment</p> <p><u>Theory of knowledge exhibition (10 marks)</u></p> <p>For this component, students are required to create an exhibition that explores how TOK manifests in the world around us. This component is internally assessed by the teacher and externally moderated by the IB at the end of the course.</p> | <p>1/3 (33%)</p> |
| <p>External assessment</p> <p><u>TOK essay on a prescribed title (10 marks)</u></p> <p>For this component, students are required to write an essay in response to one of the six prescribed titles that are issued by the IB for each examination session. As an</p> | <p>2/3 (67%)</p> |

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| external assessment component, it is marked by IB examiners. | |
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The TOK Exhibition

The TOK exhibition explores how TOK manifests in the world around us. For this reason, it is strongly recommended that students base their exhibition on one of the TOK themes (either the core theme or one of the optional themes).

The TOK exhibition is an internal assessment component—it is marked by the teacher and is externally moderated by the IB. Internal assessment is an integral part of all DP courses. It enables students to demonstrate the application of their skills and knowledge, and to pursue their personal interests.

For this task, students are required to create an exhibition of three objects that connect to one of the 35 “IA prompts” provided in the “IA prompts” section of this guide. Students must select just one IA prompt on which to base their exhibition, and all three objects must be linked to the same IA prompt.

Students are required to create an exhibition comprising three objects, or images of objects, and an accompanying written commentary on each object. To enable their exhibition to be marked by their TOK teacher and for samples of student work to be submitted to the IB for moderation, students are required to produce a single file containing:

- a title clearly indicating their selected IA prompt
- images of their three objects
- a typed commentary on each object that identifies each object and its B specific real-world context, justifies its inclusion in the exhibition and links to the IA prompt (maximum 950 words)
- appropriate citations and references.

Each student must create an individual exhibition. Group work may not be undertaken by students. Multiple students in the same TOK class are permitted to create exhibitions on the same IA prompt. However, students in the same class are not permitted to use any of the same objects.

The TOK Exhibition Process

It is recommended that a total of approximately eight hours of teaching time should be allocated to the TOK exhibition task.

The TOK exhibition process consists of three key steps.

Summary of the TOK Exhibition Process

1) Students begin their exhibition by selecting one IA prompt and three objects, or images of objects, that show how this question manifests in the world around us.

Students must select one IA prompt as the basis for their exhibition. All three objects must be linked to the same prompt.

To help them approach this task effectively, students are encouraged to root their exhibition in one of the TOK themes—either the core theme or one of the optional themes. This can help to provide an accessible starting point for students and can provide a focus to help students narrow down their choice of potential objects.

Within the teaching time allocated to undertaking this task, teachers should ensure that they include time to explain the requirements of the task and ensure that students are familiar with the assessment instrument.

2) Students should produce a single file containing their TOK exhibition. This must include:

- a title clearly indicating their selected IA prompt
- images of their three objects

- a typed commentary on each object that identifies each object and its specific real-world context, justifies each object’s inclusion in the exhibition and links to the IA prompt (maximum 950 words)
- appropriate citations and references.

Teachers are permitted to provide feedback on one draft of this work. They should provide oral or written advice on how the work could be improved, but should not edit the draft.

Once complete, this file is submitted to the TOK teacher to be marked. Samples of student work are then submitted to the IB for moderation.

3) Teachers are required to provide all students with an opportunity for their completed exhibitions to be showcased and exhibited to an audience. As this does not form part of the formal assessment task, teachers have a great deal of flexibility as to how they choose to hold these exhibitions—as in the following examples.

- A class of TOK students could hold an exhibition within one of their regular TOK classes.
- Two classes of TOK students in the same school, or different schools, could host exhibitions for each other.
- A class of TOK students could host an exhibition for younger students in the school.
- A school could host a TOK exhibition for parents and other members of the school community.
- Students could display their TOK exhibitions in a “virtual exhibition” (by using an online virtual gallery space)
- A school could host a combined event celebrating the PYP exhibition, MYP personal project and the TOK exhibition.

IA prompts

The IA prompts are a set of 35 high-level knowledge questions. Students must select one of the following IA prompts on which to base their exhibition, and all three objects must be linked to the same prompt. These IA prompts apply for all examination sessions for the life of this guide—they do not change from session to session.

Students are required to create an exhibition of three objects that connect to one of the following IA prompts.

1. What counts as knowledge?
2. Are some types of knowledge more useful than others?
3. What features of knowledge have an impact on its reliability?
4. On what grounds might we doubt a claim?
5. What counts as good evidence for a claim?
6. How does the way that we organize or classify knowledge affect what we know?
7. What are the implications of having, or not having, knowledge?
8. To what extent is certainty attainable?
9. Are some types of knowledge less open to interpretation than others?
10. What challenges are raised by the dissemination and/or communication of knowledge?
11. Can new knowledge change established values or beliefs?
12. Is bias inevitable in the production of knowledge?
13. How can we know that current knowledge is an improvement upon past knowledge?

14. Does some knowledge belong only to particular communities of knowers?
15. What constraints are there on the pursuit of knowledge?
16. Should some knowledge not be sought on ethical grounds?
17. Why do we seek knowledge?
18. Are some things unknowable?
19. What counts as a good justification for a claim?
20. What is the relationship between personal experience and knowledge?
21. What is the relationship between knowledge and culture?
22. What role do experts play in influencing our consumption or acquisition of knowledge?
23. How important are material tools in the production or acquisition of knowledge?
24. How might the context in which knowledge is presented influence whether it is accepted or rejected?
25. How can we distinguish between knowledge, belief and opinion?
26. Does our knowledge depend on our interactions with other knowers?
27. Does all knowledge impose ethical obligations on those who know it?
28. To what extent is objectivity possible in the production or acquisition of knowledge?
29. Who owns knowledge?
30. What role does imagination play in producing knowledge about the world?
31. How can we judge when evidence is adequate?
32. What makes a good explanation?

33. How is current knowledge shaped by its historical development?
34. In what ways do our values affect our acquisition of knowledge?
35. In what ways do values affect the production of knowledge?

The chosen IA prompt must be used exactly as given; it must not be altered in any way.

- If the IA prompt has been modified but it is still clear which IA prompt the student is referring to, the TOK exhibition should be marked as using the original IA prompt. Any lack of relevance in the student's response arising from this modification will be reflected in the score awarded.
- If it is clear that the TOK Exhibition is not based on one of the IA prompts listed, the TOK exhibition should be awarded a score of zero, in accordance with the TOK Exhibition assessment instrument.

Objects

An extremely wide variety of different types of objects are suitable for use in a TOK exhibition. Students are encouraged to choose objects that are of personal interest and that they have come across in their academic studies and/or their lives beyond the classroom.

It is strongly recommended that students base their exhibition on one of the themes (the core theme or one of the optional themes). This can be an extremely useful way to help students narrow down their choice of objects and give a focus to their exhibition.

Digital or Physical Objects

The objects may be digital rather than physical objects. For example, students could include a photograph of an object, such as a historical treaty, where it would not be practical/possible for them to exhibit the physical object. Students may also use digital objects such as a tweet by a political leader. However, they must be specific objects that have a specific real-world context—objects that exist

in a particular time and place (including virtual spaces). They may be objects that the student has created themselves, but they must be pre-existing objects rather than objects created specifically for the purposes of the exhibition.

Context of an object

The specific real-world context of each object is extremely important to the task. It is, therefore, important that students identify specific objects to discuss rather than using generic objects and generic images from the internet. For example, a discussion and photograph of a student's baby brother is an example of an object that has a specific real-world context, whereas a generic image of "a baby" from an internet image search is not.

Examples of the diverse kinds of objects students could select include the following.

- A tweet from the President of the United States
- An image of the painting Guernica by Pablo Picasso
- The student's own extended essay (EE)
- A basketball used by the student during their physical education lessons
- The graphic novel The Colour of Earth by Kim Dong Hwa
- A painting that the student created in their DP visual arts course
- A refillable water bottle provided to each student in a school as part of a sustainability initiative
- A news article from the popular website BuzzFeed
- A photograph of the student playing in an orchestra

Images of objects

The image of each object used in the exhibition must be appropriately referenced. If an object is the student's own original work (for example, a painting that they created in a visual arts class) then this should be identified and acknowledged to ensure that teachers and moderators are clear about the origins of the object.

Word count

The maximum overall word count for the TOK exhibition is 950 words. This word count includes the written commentaries on each of the three objects. It does not include:

- any text contained on/within the objects themselves
- acknowledgments, references (whether given in footnotes, endnotes or in-text) or bibliography.

If an exhibition exceeds the word limit, then examiners are instructed to stop reading after 950 words and to base their assessment on only the first 950 words. Extended footnotes or appendices are not appropriate to a TOK exhibition.

Guidance and authenticity

The work submitted for internal assessment must be the student's own work. However, it is not the intention that students should be left to work on the internal assessment component without any support from the teacher. The teacher should play an important role during both the planning stage and the period when the student is working on the internally assessed work.

It is recommended that a total of approximately 8 hours of teaching time should be allocated to the exhibition task. This should include:

- time for the teacher to explain the requirements of the task and ensure that students are familiar with the assessment instrument
- in-class time for students to ask questions and seek clarifications

- time for the teacher to review and monitor students' progress, and to check authenticity.

Students should be encouraged to initiate discussions with the teacher to obtain advice and information, and students must not be penalized for seeking guidance. Teachers should read and give advice to students on one draft of the work. They should provide oral or written advice on how the work could be improved, but they may not edit the draft. The next version handed to the teacher must be the final version for submission.

It is the responsibility of teachers to ensure that all students understand the basic meaning and significance of concepts that relate to academic honesty, especially authenticity and intellectual property. Teachers must ensure that all student work for assessment is prepared according to the requirements and must explain clearly to students that the internally assessed work must be entirely their own.

All work submitted to the IB for moderation or assessment must be authenticated by a teacher and must not include any known instances of suspected or confirmed misconduct. Each student must confirm that the work is his or her authentic work and constitutes the final version of that work. Once a student has officially submitted the final version of the work it cannot be retracted. The requirement to confirm the authenticity of work applies to the work of all students, not just the sample work that will be submitted to the IB for the purpose of moderation.

Authenticity may be checked by discussion with the student on the content of the work, and scrutiny of one or more of the following.

- The student's initial proposal
- The first draft of the written work
- The references provided
- The style of writing compared with work known to be that of the student
- The analysis of the work by a web-based plagiarism detection service

TOK essay on a prescribed title

The TOK essay engages students in a formal, sustained piece of writing in response to one of the six titles that are prescribed by the IB for each examination session. These titles take the form of knowledge questions that are focused on the areas of knowledge.

The TOK essay is an external assessment component. Each student's essay is submitted to the IB to be marked by IB examiners. The TOK Essay must be written in standard 12 type size and be double spaced. It is not primarily a research paper, but it is expected that specific sources will be used, and these must be acknowledged.

Essay titles

The IB releases a set of six prescribed titles for each examination session. These titles are published on the programme resource centre six months before the submission deadline.

It is not intended that students will spend six months working on their essays—teachers should select a window within that six-month period for students to work on their essays that fits with the other commitments in their school calendars. It is suggested that 10 hours of teaching time should be dedicated to working on the TOK Essay.

The chosen title must be used exactly as given; it must not be altered in any way.

- If the title has been modified but it is still clear which prescribed title for the current session it refers to, the essay will be marked against that prescribed title. Any lack of relevance in the student's response to the prescribed title arising from this modification will be reflected in the score awarded.
- If it is clear that the title bears no resemblance to any title for the current session, the essay will be awarded a score of zero, in accordance with the TOK essay assessment instrument.

Word count

The maximum length of the essay is 1,600 words. Extended footnotes or appendices are not appropriate for the TOK essay.

The word count includes:

- the main part of the essay
- any quotations.

The word count does not include:

- any acknowledgments
- the references (whether given in footnotes, endnotes or in-text) and bibliography
- any maps, charts, diagrams, annotated illustrations or tables.

If an essay exceeds the word limit, then examiners are instructed to stop reading after 1,600 words and to base their assessment on just the first 1,600 words. Students are required to indicate the number of words when the essay is uploaded during the submission process.

Guidance and authenticity

The TOK essay must be the student's own work. However, the teacher plays an important role in supporting the student during the planning and writing of their essay. Teachers are expected to explain the requirements of the task and ensure that students are familiar with the assessment instrument, provide clarifications in response to students' questions, monitor students' progress, and check the authenticity of the student work.

For the TOK essay, three formal recorded interactions between the student and teacher are required. These three interactions must be recorded on the TOK essay Planning and Progress Form (TK/PPF). This form is not referred to by examiners when determining the mark awarded for the essay. However, it is submitted to the IB as important evidence that steps have been taken to help ensure the authenticity of the student's work; it also plays an important role in terms of helping to ensure that all students receive an appropriate level of support when completing their essays.

TOK standards of assessment

- Excellent – **A**
- Good – **B**
- Satisfactory – **C**
- Mediocre – **D**
- Elementary – **E**
- Not submitted - **N**

The role of the teacher in relation to the TOK Essay

- The teacher supports the student in the writing of the essay.
- The teacher provides the student with guidance about the skills needed.
- The teacher completes the coversheet.
- The teacher is encouraged to discuss the prescribed titles with the students. However, the students should be allowed to make the final choice of a title and to develop their own ideas.
- The teacher may comment on only one preliminary draft, but is not permitted to edit it for the student.
- In general, teachers' comments should be about the essay as a whole, although it is acceptable to comment upon a particular paragraph.
- Where a student is writing in a second or third language, the teacher may indicate that a particular sentence or word is wrong.

- It is the student's, not the teacher's, responsibility to correct mistakes and make improvements. The teacher is required to ensure that the essay is the student's own work. If there is doubt, authenticity should be checked by a discussion with the student about the content of the essay submitted and a scrutiny of one or more of the following:
 - The student's initial proposal and outline
 - The first draft of the essay
 - The student's references and bibliography for the essay, where necessary.
 - The style of the writing, which may reveal obvious discrepancies.
- The teacher should make it clear to students that they will be required to sign a written declaration when submitting the essay, to confirm that it is their own work.
- The students must be made aware that their teachers will also be required to verify the claim made in the declaration.

TOK assessment instruments

Global impression marking

The TOK exhibition and the TOK essay are both marked using a global impression marking approach. This means that the assessment of both tasks is envisaged as a process of holistic or global judgment rather than an analytical process of totalling the assessment of separate criteria.

The assessment instruments present five described levels of performance. These levels are to be seen as global and holistic descriptors rather than as a checklist of necessary characteristics. When marking, the aim is to find the descriptor that conveys most accurately the level attained by the student. It is not necessary for every single aspect of a level descriptor to be met for a mark in that level to be awarded.

When using the TOK assessment instruments, it is to be understood that:

- the described levels are not a checklist; it is the overall impression that is most important
- only whole numbers should be recorded; partial marks are not acceptable
- the highest level of the instruments does not imply faultless performance, and examiners and teachers should not hesitate to use the extremes if they are appropriate descriptions of the work being assessed
- teachers and examiners should not think in terms of grades, but should concentrate on identifying the appropriate level descriptor and mark
- the IB recommends that the assessment instruments be made available to students.

There are two marks available within each level of the assessment instruments. Teachers and examiners should award the upper mark if the student's work demonstrates the qualities described in that level to a great extent—in this case, the work may be close to achieving marks in the level above. They should award the lower mark if the student's work demonstrates the qualities described to a lesser extent—in this case, the work may be close to achieving marks in the level below.

If a piece of work seems to fall between two descriptors, teachers, moderators and examiners should re-read the driving question that underpins the global impression judgment and then read the two levels again. The level that more appropriately describes the overall holistic impression of the student's work should be chosen. If the decision is taken to place the response in the higher of the two levels being considered, then the bottom of the two marks in that band should be awarded. If the decision is taken to place the response in the lower of the two bands being considered, then the upper mark in the band should be awarded.

TOK exhibition assessment instrument

The TOK exhibition is an opportunity for students to explore links between knowledge questions and the world around us.

The assessment instrument provided describes five levels of performance in response to this driving question. These levels are to be seen as holistic descriptors rather than as a checklist of characteristics.

Please note: If a student only provides images and accompanying commentaries for two objects, teachers should award a maximum of 6 marks. If a student only provides an image and accompanying commentary for one object, teachers should award a maximum of 3 marks.

Does the exhibition successfully show how TOK manifests in the world around us?

Excellent (9-10):

The exhibition clearly identifies three objects and their specific real-world contexts. Links between each of the three objects and the selected IA prompt are clearly made and well-explained. There is a strong justification of the particular contribution that each individual object makes to the exhibition. All, or nearly all, of the points are well-supported by appropriate evidence and explicit references to the selected IA prompt.

Good (7-8):

The exhibition identifies three objects and their real-world contexts. Links between each of the three objects and the selected IA prompt are explained, although this explanation may lack precision and clarity in parts. There is a justification of the contribution that each individual object makes to the exhibition. Many of the points are supported by appropriate evidence and references to the selected IA prompt.

Satisfactory (5-6):

The exhibition identifies three objects, although the real-world contexts of these objects may be vaguely or imprecisely stated. There is some explanation of the links between the three objects and the selected IA prompt. There is some justification for the inclusion of each object in the exhibition. Some of the points are supported by evidence and references to the selected IA prompt.

Basic (3-4):

The exhibition identifies three objects, although the real-world contexts of the objects may be implied rather than explicitly stated. Basic links between the objects and the selected IA prompt are made, but the explanation of these links is unconvincing and/or unfocused. There is a superficial justification for the inclusion of each object in the exhibition. Reasons for the inclusion of the objects are offered, but these are not supported by appropriate evidence and/or lack relevance to the selected IA prompt. There may be significant repetition across the justifications of the different objects.

Rudimentary (1-2):

The exhibition presents three objects, but the real-world contexts of these objects are not stated, or the images presented may be highly generic images of types of object rather than of specific real-world objects. Links between the objects and the selected IA prompt are made, but these are minimal, tenuous, or it is not clear what the student is trying to convey. There is very little justification offered for the inclusion of each object in the exhibition. The commentary on the objects is highly descriptive or consists only of unsupported assertions.

(0):

The exhibition does not reach the standard described by the other levels or does not use one of the IA prompts provided.

TOK essay assessment instrument

The TOK essay is an opportunity for students to engage in a formal, sustained piece of writing in response to a prescribed title focused on the areas of knowledge. The assessment of this task is underpinned by the following single driving question.

The assessment instrument provided describes five levels of performance in response to this driving question. These levels are to be seen as holistic descriptors rather than as a checklist of characteristics.

Does the student provide a clear, coherent and critical exploration of the essay title?

Excellent (9-10):

The discussion has a sustained focus on the title and is linked effectively to areas of knowledge. Arguments are clear, coherent and effectively supported by specific examples. The implications of arguments are considered. There is clear awareness and evaluation of different points of view.

Good (7-8):

The discussion is focused on the title and is linked effectively to areas of knowledge. Arguments are clear, coherent and supported by examples. There is awareness and some evaluation of different points of view.

Satisfactory (5-6):

The discussion is focused on the title and is developed with some links to areas of knowledge. Arguments are offered and are supported by examples. There is some awareness of different points of view.

Basic (3-4):

The discussion is connected to the title and makes superficial or limited links to areas of knowledge. The discussion is largely descriptive. Limited arguments are offered but they are unclear and are not supported by effective examples.

Rudimentary (2-3):

The discussion is weakly connected to the title. While there may be links to the areas of knowledge, any relevant points are descriptive or consist only of unsupported assertions.

(0):

The discussion does not reach the standard described by the other levels or is not a response to one of the prescribed titles for the correct examination session.

The TOK course offers teachers a great deal of flexibility and room for creativity in the design and delivery of their course. There are multiple possible entry points and ways to structure the course, and teachers have the opportunity to provide a diverse range of examples that best meet the needs and interests of their students.

References

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Program Standards and Practices by International Baccalaureate Organization 2009, published January 2014.

Handbook of procedures for the diploma programme 2015 by International Baccalaureate Organization 2009.

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