Theory of knowledge

Contents

Grade boundaries

Overall

Grade:	E	D	C	B	A
Mark range:	0-3	4-9	10-15	16-21	22-30

Essay

Grade:	E	D	C	B	A
Mark range:	0-1	2-3	4-5	6-7	8-10

Exhibition

Grade:	E	D	C	B	A
Mark range:	0-1	2-3	4-5	6-7	8-10

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Essay

Many thanks to the 484 examiners who marked TOK essays submitted by 91,936 students this session. Thanks also, to the examiners, for your thoughtful and thorough examiner reports which I hope you will find reflected in this subject report.

We advise that this subject report be read in conjunction with the Examiner Preparation Notes (EPNs) for this session which will be posted on MY IB in the Programme Resource Centre at the close of the session. These notes were written for examiners to consult before marking the essays. They provide some ideas as to how students might approach the prescribed titles. The notes are not prescriptive or exhaustive but are simply a way for all examiners to think about the titles in case they are not familiar with them or are not currently teaching the essay portion of the course. As a teacher, one might use the notes as a teaching tool when assigning past titles for practice essays. Although this subject report points out weaknesses in various aspects of the assessment, many strong and positive points are included as well. It is hoped that this report and the EPNs will be useful to teachers in preparing future students.

The Range and Quality of the Work Submitted

The students this session performed very similarly to the M22 students.

Examiners commented again this session that the driving question seemed to help students focus on the task of writing a clear, coherent, and critical response to the prescribed title and the fact that the titles, themselves, are in the form of a knowledge question also helped to focus the task.

Very few students reworded the prescribed title, which is a significant improvement and, again, was a contributing factor in helping them to focus their responses on the given title. Without doubt, it has been most advantageous to eliminate the suggestion that students formulate knowledge questions, as this often led to a shift in focus.

There did seem to be an increase in the number of essays that exceeded the 1600-word limit. Although there is no longer a point penalty, the practice is self-penalizing as examiners are instructed to stop reading after 1600 words and it is simple enough to count back the words that exceed the limit. If this means that a part of the conclusion is not read, any evaluations or implications of arguments that were included in the conclusion may not be considered, and the mark could be lower as a result.

Teacher feedback on the prescribed titles

This session, we received feedback from 1,281 schools. We value this input and, when writing the titles for future sessions, the authoring team takes into consideration all the comments made by teachers. The overall impression is that teachers thought that the essay titles were of a similar level of difficulty as the previous May session. For future reference, the link to the feedback form is published in the Programme Resource Centre during the exam period. Teachers could also contact their Diploma Coordinator for more information.

Prescribed Titles

This session, the overall popularity of the titles was 1, 2, 3, 5, 4, 6 from most to least popular. Each of the 91,936 responses was naturally an individual one, so generalizing about performance is difficult. What follows are some of the comments that appeared on many examiner reports and seem to point to key factors that contributed to the success or lack of success of students on each title.

Weakness in many essays results from students ignoring parts of the title which, of course, affects the general coherence and completeness of the answer. The most often ignored part of each title was:

- Pt 1. The word "necessary"
- Pt 2. The words "For artists and natural scientists"
- Pt 3. The question asking, "Does it matter?"
- Pt 4. The question asking, "Do you agree?"
- Pt 5. The words "always helpful"
- Pt 6. The word "determined."

1. Is replicability necessary in the production of knowledge? Discuss with reference to two areas of knowledge.

This was the most popular title, and it produced some thoughtful responses. Some confusion arose between the notions of replication and replicability, with some students too fixed on the former to explore the subtleties of the latter term – the capacity for replication – which was word used in the prescribed title. The majority of students chose the natural sciences and human sciences; both areas of knowledge offered many opportunities for discussing the need for replicability in the production of knowledge. These areas of knowledge also present different challenges, and successful students discussed examples of times when replication was necessary and times when it may have been impossible or even unethical. The best essays included a consideration of the point of view that knowledge is produced without replication or the capacity for replicability, and in successful essays, this was supported with examples and an evaluation of the strength of this point of view. Discussions of mathematics, history and the arts proved more challenging, owing to the focus on replication as copying something, repeating a thought, or even repeating an actual event from the past. In discussing history, more successful students suggested that patterns can emerge, e.g., the knowledge that similar patterns may lead to similar outcomes, and this replication, seen with hindsight, may produce knowledge of how we might cause or prevent similar occurrences. Some strong responses in the arts explored varying goals of replicability with special attention to process or performance. For example, while every performance (a ballet or sonata) is in some way unique, one could argue that replicability Is necessary because the expectation is that each performance will produce the same knowledge. Forgeries and derivative art were discussed as examples of inappropriate replication or evidence of a lack of creativity or as breaking the rules of how knowledge is produced in the arts. Overall, most students were able to organize some valid claims and provide examples to support them.

2. For artists and natural scientists, which is more important: what can be explained or what cannot be explained? Discuss with reference to the arts and the natural sciences.

This title clearly specifies that the discussion is to be focused on what artists and scientists regard as more important – what can be explained or what cannot be explained. However, many students overlooked this and instead focused on what they or the public would consider to be more important. If they did not refer to artists or scientists, this resulted in a weak connection to the title.

The most successful responses explored the interplay between the explained and unexplained in each area of knowledge, commenting on how the two are inextricably linked with either element varying in importance depending on the circumstance. What can be explained makes us feel secure, confident, knowledgeable, however, what cannot be explained may have the opposite result, but it may also intrigue scientists and others and drive the pursuit of knowledge. Many successful students made a distinction for artists to "express" or "communicate" rather than explain. So, what cannot be expressed would present a

real challenge for visual artists who strive to express that which sometimes cannot be put into words, or for the poet who stives to communicate using language that departs from the ordinary. The strongest responses allowed for some generalizations and pointed to the implications of the interplay between the two ideas and acknowledged the distinction between what cannot be explained in principle and what cannot be explained now but may well be in the future – thus creating two readings of the title that complemented each other effectively.

3. Does it matter if our acquisition of knowledge happens in "bubbles" where some information and voices are excluded? Discuss with reference to two areas of knowledge.

In responding to this title, students seemed to struggle the most with connecting their ideas to concrete examples in the areas of knowledge. Many students wrote as if they were well acquainted with the "bubbles" concept, and this gave the essays an air of confidence in many cases, but unfortunately, the fact that students associate bubbles primarily with social media encouraged them to concentrate their analysis on that field with the result that links and discussions of areas of knowledge were sometimes overlooked. Also, for many, an obvious connection to the title was the existence of bubbles in the political field, but unfortunately, most students dealt with the effect of bubbles on political events rather than discussing political science as a human science. A number of students identified which voices would be excluded from the bubbles they discussed, and the more successful essays included suggestions about how the exclusion of those voices mattered to the acquisition of knowledge or that bubbles could be effective in excluding the voices of those who set out to undermine the acquisition of knowledge. This title elicited many interesting responses and students seemed to have plenty of experience with the term. In less successful responses students neglected the part of the title that asked, "does it matter." This omission of such a significant consideration would have diminished the overall focus on the title and may have lowered the mark to the basic level.

4. Do you agree that it is "astonishing that so little knowledge can give us so much power" (Bertrand Russell)? Discuss with reference to the natural sciences and one other area of knowledge.

This title was complex with the importance of addressing three distinct aspects: 'little knowledge', 'power', and 'astonishment', and less successful students failed to address all these elements. Some students did not understand the title well enough to present a convincing argument. Others were enthusiastic in tracing the historical background to the knowledge we have today by failing to effectively address the notion of 'little knowledge'. The key to success was arguing coherently and consistently at each step: why is this (example) "little knowledge" (or not), how does this (discovery) result in "so much power" (or maybe so little), and why is (or it isn't) this "astonishing"? Russell's words are paradoxical because the accepted wisdom is that "knowledge is power" - that there is a direct link between the amount of knowledge and the amount of power. Russell inverts this perspective and proposes another one, which he finds "astonishing" because it is unexpected. Rejecting the paradox implies upholding the accepted wisdom, while agreeing with Russell requires explaining why the paradox holds. Students needed to consider the meaning of "little knowledge" and what counts as "little knowledge" and for whom, as well as the meaning of "so much power" and what counts as "so much power" and for whom. The words "little" and "much" are very vague, so they needed to be justified. Better responses acknowledged that the apparent "little knowledge" was often the tip of an iceberg. Others said little knowledge is so often powerful, that this is no longer astonishing. Very few students discussed situations where there was a great deal of knowledge,

but which also resulted in little power, as could certainly occur in all areas of knowledge and, if discussed, could have shown awareness of another point of view.

5. Are visual representations always helpful in the communication of knowledge? Discuss with reference to the human sciences and mathematics.

Many examiners expressed surprise at the number of students who did not include the visual representations referenced in their examples. Many of the discussions relied on vague descriptions of visual representations, which often resulted in a fairly superficial exploration of the title. A number of students provided very similar charts and graphs from both areas of knowledge, making it difficult to discern any real difference between the areas of knowledge. The most successful essays gave a coherent examination of the link between the specific visual representation and the knowledge that was communicated. Another strong point was made by considering how the amount of background knowledge of the knower could impact the helpfulness of visual representations, demonstrating that the same graph, for example, could be helpful or not depending on the user. One of the advantages of this title seemed to be that the expression "always useful" in the wording of the title made it relatively easy to raise and evaluate different points of view in the discussion and a large number of essays did so, dealing with cases in which visual representations facilitated communication because of their clarity, and cases in which they hindered it because of their incompleteness or ambiguity.

6. To what extent is the knowledge we produce determined by the methodologies we use? Discuss with reference to history and **one** other area of knowledge.

The main challenge for students responding to this title was in establishing a link between methodologies and the knowledge produced. The one other most frequently discussed area of knowledge was natural science, probably because the majority of students are familiar with the scientific method. However, it was not enough to refer to some knowledge and claim that it is the result of applying the scientific or historical method; this needed to be argued and justified and the specific methodology acknowledged. With the focus on methodology and the production of knowledge, the more successful students took the opportunity to explore the importance of the historical method, for example, and understood that all historians, with their sources, use the same method to establish the facts of history. Historians do not merely establish facts; they also link them in a chain of causes and effects, which is the basis of many debates in the study of history. Successful students also took the opportunity to discuss what else, besides methodologies, contributed to the production of knowledge and for the most part there were two ideas: serendipity and tinkering. In both this cases, better discussions acknowledged the work that needed to follow the initial "aha" moment or accidental discovery in order to claim that knowledge was produced. For tinkerers to be accorded respect in either the area of history or science, they must, in the end, rely on the established methodology to validate their findings.

Recommendation for the teaching of future candidates

One comment that examiners make quite often is that an essay is "descriptive," which on the assessment instrument is a characteristic of a basic essay. It would be advisable for students to spend time considering the driving question that is at the top of the assessment instrument; this is the question that examiners consider when marking the essay and their global impression of the level of achievement is formed in response to the question of whether the student has provided "a critical exploration." While description is an essential component of all writing, a critical exploration goes deeper and beyond *mere* description. A *descriptive* essay lacks the qualities or components that are essential to achieve a good or excellent mark as described on the assessment instrument. In a "critical exploration," arguments are supported by

examples, the implications of arguments are considered, and there is an awareness and evaluation of different points of view. Considering the implications of one's argument indicates an awareness that there are consequences to any argument and a critical essay would acknowledge and possibly address some of them. A critical exploration would also often acknowledge the limitations of one's own arguments and show an awareness that there are different points of view, the student's own and others. An even more sophisticated essay will acknowledge the other points of view and evaluate them.

In the previous course, students were asked to discuss counterclaims to their main argument. Although a counterclaim is a valid way to entertain or establish a new point of view, it often results in students just disagreeing or contradicting their entire argument which is then hardly ever resolved. Therefore, the more nuanced expression "point of view" was introduced to encourage students to consider other ways of seeing something that might bring new insight or allow for inclusion of the ideas of others, etc. This new perspective does not necessarily contradict or rule out the validity of the original position taken; it does not have to be an opposite or extreme departure from the main argument.

As examples are such an important part of an essay which is essentially an argument that must be supported by evidence, this report always devotes some time to advising teachers and, through them, students, on how to best employ examples to justify their position and illustrate the points being made. It is not up to the examiner to infer the connection between the example, the prescribed title and/or the point being made. The example should be explicitly connected and shown to be sufficient to justify a point; if not, perhaps a second example is needed. Although there may not be any inherently "bad" examples, there are certainly examples that are "better" in specific instances. Examples that the students draw from their own studies and their own lives are often the most effective as the student fully understands the example and writes in a way that sheds light on the point being made. If this level of familiarity is missing, the example is often just inserted and there is no analysis or no consideration of the implication of the example and how it justifies a claim. Examiners often comment that there are lengthy descriptions of examples where the student's voice seems to be entirely missing. This is often the case with an example that is suggested by a help site and, going forward, it will probably happen with AI-generated examples which may support the point but may also lack any depth of analysis by the student.

As mentioned in previous reports, students continue to have difficulties when they select history as one of their areas of knowledge. Most frequent is the tendency to give examples of historic events but not the evaluation or interpretation of those events which is the knowledge produced by historians. Also, when students write about an historical event, they should be cautioned to write about events that have been the subject of historical investigation by actual historians. Teachers are reminded that, in IB history, students are taught that for events to have had the chance to be investigated by historians, they should only consider events that are at least 10 years in the past. Otherwise, students often end up discussing a "current event" which may be too new for historians to have had the time to come to any conclusions about, or the event itself may still be occurring and thus the knowledge will be incomplete. Another result is that students who write about current events often cite the analysis of journalists who are not historians. The work of journalists might very well become a source that will be considered and vetted for accuracy by the historian, but this will occur as part of the work of historiography. Examiners commented that geography and economics were often discussed as disciplines in the human sciences, and those students who chose them did comparatively well. Political science continues to be confused with the activity of politics, producing a discussion which is ineffective, and often students seem unaware of the difference between the two.

Finally, as important as the Planning and Progress Form/TKPPF, and the required three interactions have been in the past, they will be even more important going forward. While it was once a rather "pro forma"

activity that mostly nudged students along during the essay-writing process and encouraged a systematic approach to fulfilling the expectations of the assessment, going forward, it will be an essential document that will show that students have engaged in all the steps of the suggested writing process (selection of a title, discussion of the essay plan, submission of one, final draft/teacher feedback on the draft) and that teachers are able to state with confidence that the essay is the student's own work. Because of the temptation that AI offers, as well as the "help" offered by tutors, on-line sites, and essay mills, teachers will need to increase their vigilance to ensure that the final essay is the student's own work, and one way to do this is by fully utilizing the PPF to monitor the essay writing process.

Exhibition

The range and suitability of the work submitted

In this third examination session of the new internal assessment, we see an improvement in the way that teachers and students understand the opportunities that the task provides, and the key role that the objects play in revealing how TOK manifests in the world. Most students chose three objects that are interesting to them, wide-ranging, and unique. They considered how the objects connect with the issues and concepts provided in the prompt, and prepared three distinct commentaries, usually giving each of them equivalent treatment.

The task works well for students completing the first year of their TOK studies, with accessible challenges that are distinct from the formal nature of the TOK essay and are still in many ways good preparation for it. Most students chose objects from their own personal experiences, their studies, and their interests outside of the classroom. They generally knew to identify the objects first, thereby providing the basis for consideration of the prompt. With such a wide choice of potentially suitable objects and the wide variety of prompts, these early choices are critical to the success of the task and remain one of the main challenges for students. Examiners noted that when students choose objects that they are familiar with and interested in they were more successful in exploring the aspects of knowledge these objects revealed.

As the guide strongly recommends that students select a theme to focus their exhibition, it was pleasing to see more students using the optional or core themes to guide their choices of objects, and this supported their links to and interpretation of the prompt. Even so, examiners noticed some instances where the use of a theme narrowed the discussion or resulted in the repetition of the same idea across the commentaries. This was most evident when the themes of Knowledge and religion or Knowledge and technology were used.

Overall, students made better use of the word count. However, where the word count was underutilized, with word totals in the 800s, the problem was often exacerbated by the addition of lengthy introductions and conclusions, which are not required. And while there were fewer introductions overall, there was a noticeable tendency to add conclusions, often cutting the third commentary short to fit them in.

Examiners also noted a narrowing in the range of selected prompts, with some of them rarely explored. Prompts 11, 13, 17, 20, 21 were the most popular choices and prompts 19, 27, 31, 32 the least popular.

Prompt 20 was easily the most common choice, but it was not the most successful as it often led to discussions of personal incidents and 'aha' moments with little attention to knowledge.

As expected with such a large and diverse cohort of students, the full range of marks was used. The work ranged from Excellent to Rudimentary, with most responses in the Satisfactory or Basic category. Overall, teachers' marks tended to be slightly generous.

Candidate performance against each criterion

The exhibition assessment instrument has five levels which range from Rudimentary to Excellent. The 0 mark level is reserved for exhibitions which do not reach even the minimum standard or do not use one of the prompts. The descriptors in the five levels address four aspects which students need to explore, and, while marking is holistic, discussing these aspects separately as done below helps address specific matters or concerns.

A. The identification of three objects and their specific real-world contexts

Generally, this was done well and much improved over the previous two examination sessions. Most students knew to clearly identify three individual objects and contextualize them by providing their specific situation in the world. Most of the responses were organized correctly with each object followed directly by its commentary. Objects ranged from personal to more general and there was an interesting variety. However, generic objects, those that were not specifically situated in time or place, were challenging for students to explore successfully as they led to generalized or sweeping assertions.

Many object choices were personal to the students and examiners remarked that teachers' comments often showed that this was being misunderstood as a requirement. A personal approach is acceptable and may help by drawing on a student's personal experience of constructing or acquiring knowledge. However, students are not required to have a personal connection to the object and the word 'personal' does not appear in the assessment instrument.

Examiners noted the frequently used objects, likely drawn from Internet help sites or TOK texts, were mobile phones, textbooks, Bibles, the Quran, tweets and screen shots from social media accounts, maps, calculators, the "Starry Night" painting, the Copernican configuration, and the atomic model. There is nothing wrong with these choices in themselves but very often it was evident that they were not thought through, and that the selection was not made because the student had identified the knowledge manifested by them but to comply with the requirement of identifying an object.

B. The explanation of links between the objects and the selected prompt

Most students knew to explain the link between the object and the prompt immediately after their identification of the object. Where this was not done it weakened the rest of the commentary because the object to prompt connection forms the basis for the balance of the commentary. Weak links were sometimes the result of misinterpreting or ignoring some of the terms in the prompt and this further impacted the quality of the work.

Students did well when they drew on specific features of the object and explained how they demonstrated aspects of the prompt. Some teachers had provided students stems as a reminder about explaining this link such as, 'I have included this object because it demonstrates the prompt by…'

C. The justification for the contribution of each object to the exhibition

This was often underdeveloped or done poorly and remains an area calling for further improvement. As the core of the task, justifying the contribution the specific object makes to the exhibition requires the most attention. Too often this was where students lost track of the object to prompt connection and its associated TOK significance and instead departed to discuss general and mostly unrelated issues. Students are asked to link each of their chosen objects to their selected prompt and that requires them to explore what TOK there is in the object. The justification is the next step in that exploration, it is the stronger and more detailed explanation of the link between the object and the prompt and for that, the specific context of the object is needed. A generic object will not give any TOK to talk about. The justification will discuss what it is about that specific object in its time and place that is so interesting for the prompt.

D. The supporting evidence and references to the prompt

The weaker commentaries were based on unfounded, often inaccurate, claims, exaggerations, or invented hypothetical situations. Given that the overall goal of the task is to show how TOK manifests in the real-world, the lack of concrete evidence inherent in some responses necessarily resulted in low scores. Frequently students used fictional stories as objects and then attached the fictional elements to the prompt, missing the goal of a real-world investigation. When students used fiction and applied the meaning of the work to real-world contexts, they were able to successfully show the contribution that the fictional object made to TOK thinking.

With the use of evidence, some research may be required, and this is often seen to be done in stronger responses. Too often the referencing of such research was mishandled or incomplete. While this is not part of the assessment instrument, it can raise concerns about academic integrity and in some cases led examiners to raise exceptions calling for further investigation by IB administrators.

The other problem associated with the provision of evidence was that students sometimes got stuck on the facts and details, producing overly descriptive commentaries. Examiners noted this tendency in particular when students discussed improvements in the functions of technology and material tools instead of focusing on the production of knowledge.

Recommendations and guidance for the teaching of future candidates

Teachers are expected to show in their comments how their thinking about the student's response justified their mark. These comments are an important part of the moderation process and can be added to the exhibition itself or in the teacher comment section on IBIS. Too often the teacher comments are lengthy summaries of the student's work, others are formative feedback meant for the student, or simply phrases copied from the assessment instrument without supporting examples from the exhibition itself. At times there are no comments at all and that is a disservice to the student given that moderation is about determining whether the teacher has applied the assessment instrument adequately.

Teacher comments at times indicated that the mark had been influenced by features that are not part of the requirements for the exhibition and not included in the assessment instrument. Examples of this included assumptions that objects should be personal, that areas of knowledge or implications needed to be dealt with, or audience interest and student effort needed to be factored in. To assure more accurate grading, it is strongly recommended that teachers refer to the key words in each mark band as their guiding reference. This will ensure that the assessment process is consistent and adheres to the established criteria.

Teachers should help students remember that the prompts are knowledge questions which, according to the guide, are 1) about knowledge, 2) contestable, and 3) explorations of knowledge concepts. So, the response must be a commentary on knowledge or the nature of knowing with regard to the particular aspects of knowledge provided in the prompt. Students should interrogate the TOK space not just describe it, use the related TOK concepts and terms, and look for the potential tension or contestable areas in the prompts to better achieve TOK thinking.

Teachers should also keep in mind the requirements and processes of moderation and assessment. For example, if the prompt is changed or not included, this could result in a zero mark unless the examiner can guess from the commentaries which actual prompt is being considered. If a student only provides two images and accompanying commentaries, the maximum possible mark is a 6 and if there is only one image and commentary, the maximum mark is a 3 (see page 46 of the PDF version of the subject guide under TOK exhibition assessment instrument).

Teachers should remind students that there is no need for introductory or concluding paragraphs. These tend to be very generalized summaries of intentions or final remarks that add little or nothing to the overall response and use up words.

A suggestion for teachers is to use objects as the starting point for classroom discussions, activities, and formative assessments so students become familiar with using objects as the foundation for TOK discussions. Teachers should ensure that students understand the value in approaching prompts from different points of view and how the choices of objects can support this.

Teachers are reminded that they can provide feedback on one draft of the student's work. This can be oral or written and it can suggest ways to make final adjustments to the work. Teachers must not edit the draft. Once the students have completed their final adjustments, they submit the work to the teacher for marking and there can be no further modifications of the work after that. In this final draft, it is important to maintain the anonymity of the students, teacher, and schools. Some responses are still including names, student codes, or identifying both teachers and schools.

Please be reminded that the actual showcasing of the students' exhibition at the school or in any other platform is the showcasing of the students' FINAL work; the showcasing is not an opportunity for students to get feedback on their work to then modify their exhibitions before submission.

Much is learned from each experience with assessment and particular aspects of the work are highlighted below to include areas that require attention. These are provided as bullet points to facilitate reference to them.

- **The word count**. Students need to make effective use of the available number of words. Each of the three commentaries should receive equivalent treatment of approximately 315 words in length. Students need to include the word count in the title of their document and make sure they do not exceed 950 words as examiners are instructed to stop reading beyond that.

- **Introductions and conclusions.** These tend to use up the word count that is better applied to the commentaries. The exhibition is not an essay; it is a commentary that is interrogating a knowledge question, the prompt. An introductory sentence is sometimes useful, but students must avoid introductory paragraphs because they are unlikely to initiate the investigation into the connections between each object and the prompt. Conclusions are not recommended as they usually serve to reach a resolution, to provide an answer, and that is not the task of the exhibition.

- **The prompt.** Students must write their selected prompt at the top of their document and ideally include the prompt number as well. It is important that the prompt be written exactly as it appears in the guide and not altered in any way. As the prompts are wide-ranging in their structure and focus, teachers should discuss them fully with their students to ensure they make informed choices based on their interests, understanding, and strengths. Students need to tie their commentaries fully to the prompt. Prompts refer to key TOK concepts and it is expected that students reflect on the significance of those concepts on the knowledge issue indicated in the prompt.
It is important to help students avoid misreading, misunderstanding, or interpreting the wording or meaning of a prompt differently. Some examples of these occurrences
noted by examiners follow:

- #6, "How does the way that we organize or classify knowledge affect what we know?" often results in identifying systems of classification and misses discussing how they 'affect what we know'.
- #10, "What challenges are raised by the dissemination and/or communication of knowledge?" will often lead to discussions, not of knowledge, but of propaganda, opinion, and misinformation.
- #12, "Is bias inevitable in the production of knowledge?" can sometimes include examples of bias, and misses dealing with 'inevitable'.
- #13, "How can we know that current knowledge is an improvement upon past knowledge?" leads some students to focus on the improved functions of various technologies and material tools.
- #17, "Why do we seek knowledge?" is not *How* do we seek knowledge?
- #18, "Are some things unknowable?" is not Are some things *unknown*?
- #19, "What counts as a good justification for a claim?" is not about what justification is but asks What is *good justification*?
- #20, "What is the relationship between personal experience and knowledge?" is not narrowly about what a student may have learned from a personal experience.
- #21, "What is the relationship between knowledge and culture?" is not about differences in cultural knowledge but the *relationship*.
- #22, "What role do experts play in influencing our consumption or acquisition of knowledge?" often sees students struggle with the concept of 'experts' as they identify notable or public figures and discuss their opinions in place of knowledge.
- #23, "How important are material tools in the production or acquisition of knowledge?" sees students sometimes miss the significance of *how important* and instead describe the uses of various tools.
- #26, "Does our knowledge depend on our interactions with other knowers?" often has students describing interactions between knowers and ignoring *does it depend on*. Some responses tend to be autobiographical in nature and overlooks the TOK issue about the extent to which knowledge can ever be a solo endeavour. Students sometimes simply relate a story about someone teaching them some skill or information that they might not have learned otherwise, and they get stuck at this superficial level.
- #28, "To what extent is objectivity possible in the production or acquisition of knowledge?" often sees students missing *to what extent is it possible* in preference for describing examples of objectivity and subjectivity.
- #31, "How can we judge when evidence is adequate?" often becomes descriptions of adequate evidence without addressing *how can we judge* adequate evidence.
- #33, "How is current knowledge shaped by its historical development?" is not just about historical developments but should include current knowledge. There is also here a tendency for students to discuss improvements in the functions of technology.

Several prompts provide choices for students through the use of conjunctions such as 'or', and this allows them to write about one, or the other term, or both of the terms in one or the other or across all of the commentaries.

- **Images.** Each object in the exhibition is shown as an image in the document and these are shown above their associated commentaries. Students select a wide variety of images depending on their choice of objects and many of the images are produced by the students themselves. Other images tend to be stock images downloaded from the Internet and in these cases the objects are often generic leading to superficial and generalized treatments in the commentaries. In many cases references are required for the images and they should be included following the appropriate format for citations even though the references are not part of the mark; they are an academic integrity requirement.

- **Themes.** While themes do not influence the mark assigned to the exhibition and are not mentioned in the assessment instrument, they may help students make choices about the application of the prompt and the selection of objects and avoid vagueness. When discussing the various prompts, teachers can discuss with students the way to classify prompts according to their potential to connect with the optional and core themes.

- **Objects and context.** Objects may be detached from a student's own personal experience, and be drawn from their studies, or their outside interests. All these choices work well for students when they have good ideas about the knowledge the objects demonstrate that they then relate to the prompt. When the object is interesting to the student and well understood by them, they are better able to explore its TOK significance.

  It is the generic objects that students have little personal understanding of or interest in that fail to support successful investigations. It is not enough to select, for example, a bible and identify it as the family bible if the student then fails to discuss what is specific about that particular bible that says something about the knowledge issues or concepts in the prompt. An effective way to know if an object is contextualized and specific enough is to test whether it is "swappable" by any other similar object. If it is, then it is likely not specific enough to have something interesting to say for the prompt.

  When choosing the objects, it helps students to consider if it is something that could be exhibited, what it is that the object tells us, why it is interesting, how it demonstrates the ideas in the prompt, and what it says about the way TOK manifests in the world around us.

- **Links:** These are most successful when they are made explicitly and concisely. They stem from the specific nature of the object and how it demonstrates the TOK issues raised in the prompt. Links need to be made between each object and the prompt; there is no need for them to be linked to each other, even though they may be classified similarly if the student has chosen to use a theme.

- **Justification of inclusion of object.** While this is sometimes challenging for the student it is helpful for them to see the justification as following from the links. Links are successfully made when they clearly explain the connection between the object and the knowledge question in the prompt. The justification provides further elaboration of that connection by showing what it is about that specific object that is so interesting in making us think about the prompt.

- **Evidence and references back to the prompt.** Students are required to support their arguments and they must not make unsupported claims. That is what is meant by 'evidence.' Evidence may take many forms – it may for instance come from an external source, or from the student's own experience (in their studies or beyond).

Further comments

The key to success in the exhibition is the driving question that shows what the task is all about. Through their selection of objects and the choice of prompts, students are expected to show how TOK manifests in the world around us. The three commentaries are TOK discussions of the particular aspects of knowledge identified in the prompt and how they relate to the specific features of each object.

For both teachers and examiners there is the ongoing challenge of marking holistically when there are three quite distinct commentaries that take different approaches to a prompt based on differing evidence, so it is very important that they always think of the global impression formed by the particular exhibition.

There is an increasing tendency for students to begin with a choice of prompt and then search for objects, usually on the Internet and this may be influenced by the increasing functionalities of AI. If they find that they are forcing the search for objects, they should consider starting with objects that are interesting to them and then thinking about the TOK connections. That will lead them to choose a pertinent prompt. On the other hand, students may start with a prompt which they find particularly interesting and have ideas about the objects they will choose. Both entry points are equally valid, what matters is the thinking that goes with them.

The Teacher Support Material, assessed student work and the subject reports made available on the Programme Resource Centre are very useful and should be consulted thoroughly by teachers. The assessment instrument on its own is not enough to understand the standard and to know how to apply it.

The organization of the objects and commentaries in the exhibition is important to the clarity of the ideas, the coherence of the points being made, and the meeting of the requirements. A format such as the one below (not necessarily in boxes) is recommended as a practical approach.

TOK Internal assessment – the exhibition		
Word count	*Prompt number*	*Prompt*
Theme (recommended not mandatory)		

Commentary 1

Image of object 1

Commentary

Commentary 2

Image of object 2
Commentary

Commentary 3

Image of object 3
Commentary