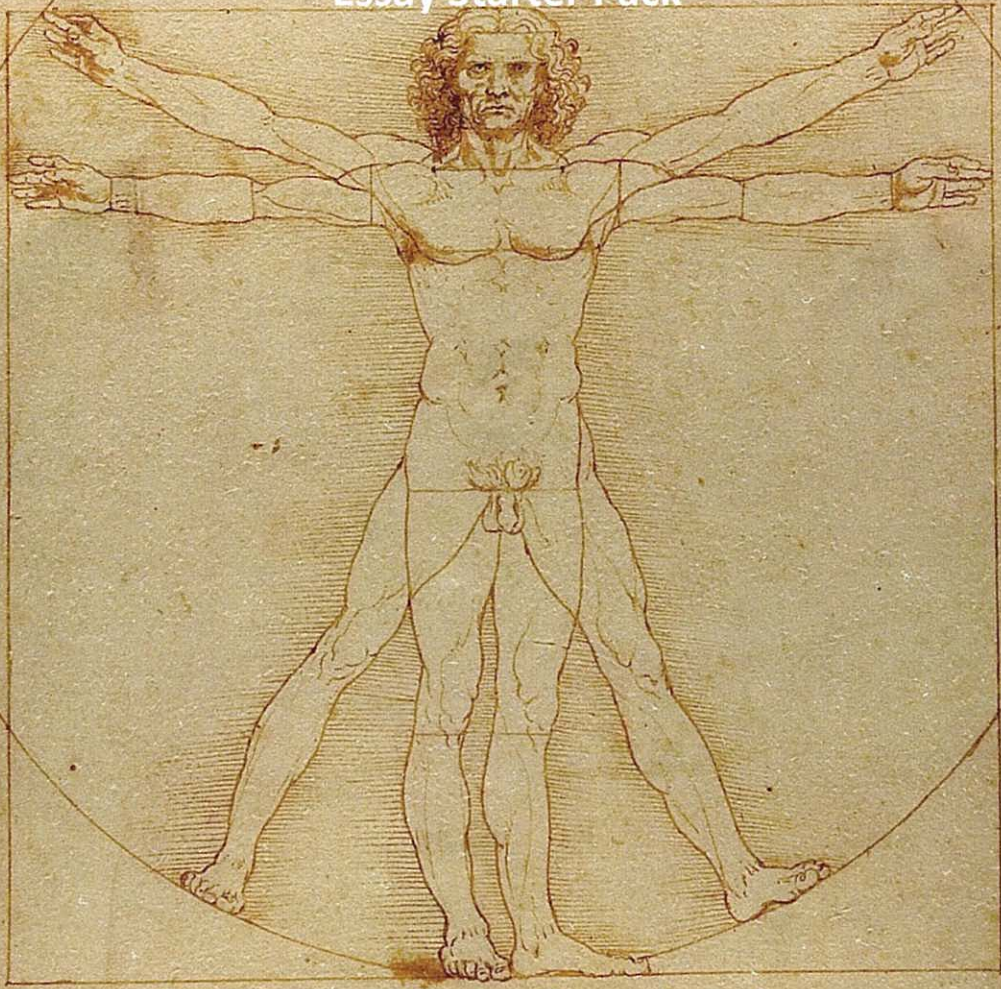


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# TOK

## Essay Starter Pack



## Victoria Shanghai Academy

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# TOK Essay Checklist

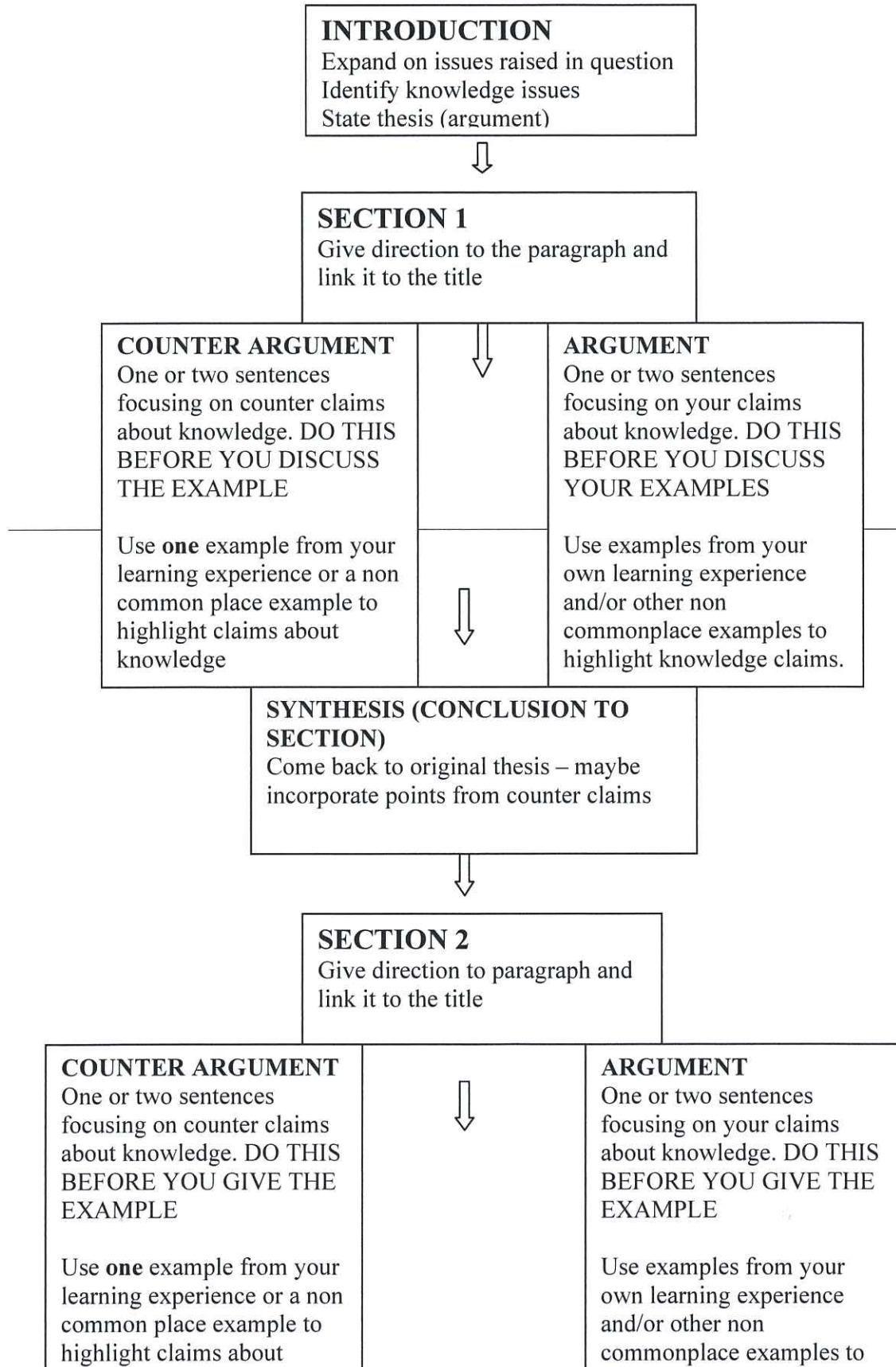
- 1. My completed essay is correctly **FORMATTED** – footnotes, quotes (embedded or indented) MLA/APA format. Also, I answer the essay question that is asked – **I DO NOT LOSE FOCUS** on the essay question.
- 2. My essay is a polished piece of work that is free of **GRAMMATICAL ERRORS**– I have been working on this for more than three months and this is reflected in the quality of work presented.
- 3. The examples I highlight in order to support my claims are drawn from both **PERSONAL OBSERVATION (ROK)** and influential **THINKERS AND/ OR THEORIES** related to my topic. In short, my essay is both theoretically weighty and personal. I use the **personal pronouns I/ my** in my writing.
- 4. My essay is properly **RESEARCHED** and contains at least 5 primary or secondary **SOURCES**
- 5. My essay does not contain factual **INACCURACIES**.
- 6. The central knowledge issue I explore is reflected in the **THESIS STATEMENT**. I have a strong **INTRODUCTION** that summarizes and contextualizes the points (topic sentences) I make in the body of my essay as well as a **CONCLUSION** that highlights the main issues I have explored. I use the **'Keyhole'** essay structure.
- 7. The **TOPIC SENTENCE** of each paragraph further develops the central knowledge issue (thesis statement) I am exploring. The body of my paragraph contains example(s) that further develop my topic sentence.
- 8. All claims (topic sentences) in support of my THESIS STATEMENT, are paired with counter-claims that address flaws/weaknesses/ fallacies in the claims I have made. All **CLAIMS AND COUNTER-CLAIMS** are supported by relevant example(s). See No. 3
- 9. The **KNOWLEDGE ISSUE** I identify is clear and speaks to problems/ issues associated with the **CONSTRUCTION OF KNOWLEDGE**. In simple terms, what are the problems with what I/we know or believe about something, and how have I/we arrived at this understanding? Point to remember: WOK always create knowledge issues!!! Or, KI's stem from WOK!!!
- 10. In identifying KI's I have explored the **WAYS OF KNOWING** and how they lead to problems/issues in the construction of knowledge.
- 11. All my examples come from at least two **AREAS OF KNOWLEDGE**
- 12. I do not speak in terms of **ABSOLUTES**; that is, I do not use the words always/never/ is / does/ has / without first considering how strong these words are and their implications.
- 13. My writing reflects my **UNDERSTANDING OF LOGIC, REASON, ARGUMENTATION** and cause and effect. I use transition words such as: **thus, therefore, consequently, as a result, since, it follows that** etc... accurately.
- 14. The **REGISTER AND TONE** of my essay is formal. I have included the following terminology:

Assertion  
 Assumption  
 Presumption  
 Premise  
 Claim  
 Argument  
 Justify/ Support/prove  
 Evidence  
 Conclusion  
 Truth  
 Validity  
 Fallacy  
 Inference  
 Deductive reasoning  
 Inductive reasoning

Empiricism/empirical  
 Bias  
 Reason  
 Justifiable  
 Rational  
 Belief  
 Perception  
 Logic/logical  
 Conclusive  
 Theory/ theorem  
 Proof  
 Persuade  
 Convince  
 Values  
 Certainty

Prejudice  
 Evaluate  
 Claim  
 Know  
 Reason (v)  
 Predict  
 Conclude  
 Consequences  
 Implications  
 Persuade  
 Identify  
 Test  
 Reduce  
 Categorize  
 Generalize

## Diagram for Writing ToK Essays



**SYNTHESIS (CONCLUSION TO SECTION)**

Come back to original thesis – maybe incorporate points from counter claims



THERE CAN BE A THIRD SECTION WHICH WILL WORK IN THE SAME WAY AS SECTIONS ONE AND TWO



**CONCLUSION**

The conclusion either subtly restates the argument or moves the argument on.  
New questions can emerge from the essay.

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**NOTES**

- 1) As a general guide talk about three ways of knowing (perception, reason, language, emotion) and three areas of knowing – this is dependant on the title
- 2) Try to find at least one personal examples of a good learning experience from class
- 3) Examples are used to illustrate problems of knowledge. DON'T JUST WRITE ABOUT THE EXAMPLE AND FORGET THE ToK.



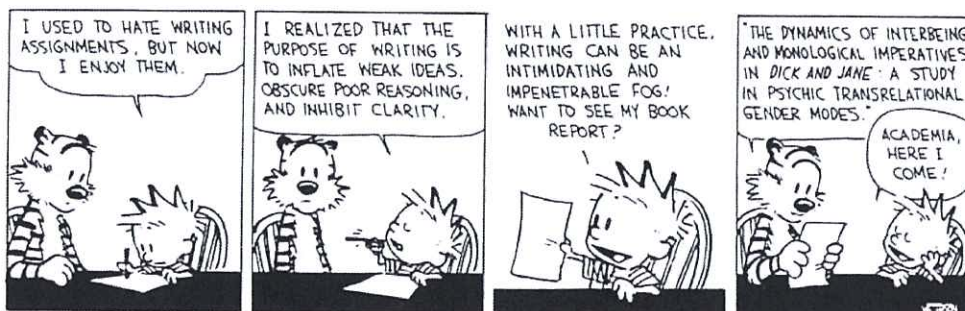
## Ten Tips on writing a good Theory of Knowledge essay

There is no general method or formula which is 'correct'. You can probably ignore some of this advice and still write a good essay... but following it may well help.

- 1 **Familiarise yourself with the assessment criteria;** notice, for example that (i) your examples should be varied and culturally diverse, (ii) you will lose marks if you do not properly cite any sources you use, and (iii) you need a clear introduction and conclusion.
- 2 **Do not get bogged down in definitions.** While it is important to know what you are talking about, you could waste a whole essay in trying to, say, define 'truth'. Also, dictionary definitions are not always helpful - if a dictionary says that 'reality is that which is real' then what does this tell you?
- 3 **Make distinctions between different areas of knowledge and different ways of knowing.** You should avoid making claims that apply to all aspects of knowledge - because different areas of knowledge or ways of knowing 'work' differently, and what is true for e.g. maths is unlikely to be quite right for e.g. biology.
- 4 **Do not make grandiose but rather meaningless claims.** The best (or worst) one I have seen was something like "*Since the dawn of the universe, truth has haunted mankind*". The same sentiment (if I understand it correctly, which I may not) would be much better put as "*Humans are a curious species, always seeking the truth*" (which may still be an exaggeration).
- 5 **In your introduction spend a few lines explaining the question,** and clarifying how you are going to interpret it. You may want to offer a position that you know is wrong, and explain why it is wrong, perhaps developing it into a better one. For example, one essay title was based on a quote from CS Lewis: "What I tell you three times is true". A possible introduction might be:

*Lewis's quote seems, at first sight, to be ridiculous. If I tell you three times that I am an alien, or that  $1 + 1 = 5$ , you are unlikely to believe me. Mere repetition is not enough. However, if I ask you how you know that Canberra is the capital of Australia, it may well be that you know it simply because you have heard it several times. In other words in this case, repetition is enough. So perhaps there is some merit in the claim, depending on the particular area of knowledge in question.*

*How not to approach a Theory of Knowledge Essay*



- 6 **In your introduction try to provide some 'signposts' that indicate what you will be trying to do in your essay.** It is much easier to follow an argument when you have a vague idea where it is headed, but you should not spell out the whole thing. Following on the example in 5 above, the next sentence might be

*In this essay I shall attempt to see under what circumstances repetition becomes convincing, and by looking at the natural sciences and empirical knowledge in general, I hope to show that Lewis is absolutely right in certain areas of knowledge, and completely wrong in others.*

- 7 **Use your own original examples to make your points.** These can be taken from your IB subjects, your everyday life, newspapers and so on. Try not to use the rather tired examples of say, the flat earth as an example of an error that everyone believed, or Hitler as an immoral person. Also the best essays do not spend a great deal of space describing examples, but use them often almost in passing to make an analytical point which can then be developed.
- 8 **Remember that your essay is an extended argument- not a collection of several loosely related points.** Your essay should move from point to point while always extending the argument and clarifying the nature of your answer. Try to develop a narrative or theme that will link paragraphs and points together smoothly. This may well not be a simple matter and is likely to require a great deal of thought, but it does mean that you can make the essay your own. Find your own theme and address the issues in a manner that interests you and means something to you.
- 9 **Try to develop an abstract as you write your essay.** This is really to help you with point 8. An abstract is a one-paragraph summary of your argument- and if you cannot explain your argument briefly then the reader will have no chance of understanding it. The abstract should not be included when you have finished the essay, but the act of writing it should help you retain clarity over what it is that you are trying to do. It is very easy to get lost in TOK essays; the abstract is a way of sticking to the argument that you want to make.
- 10 **In your conclusion try to summarise (very briefly - one or two sentences) what you have said, and try to end with a forward-looking view.** This might be an explanation of exactly why you were unable to answer the question, or what you would need to know in order to answer the question. Do not just reiterate your arguments. The final paragraph should 'feel' like conclusion and not leave the reader hanging in mid-air..

*It seems then, that the nature of our senses implies that we will never have access to the 'real world' (though as we have seen, 'real world' is a highly problematic phrase). Some people may feel this is a great disappointment, while others may not care, but it is certainly humbling to note that even in this advanced age, for all our scientific expertise and high-tech machines, we will never know reality.*

Given that several of the [...] knowledge [issues] that you identify may apply to the essay you are writing, you may wish to acknowledge the irony of taking up a position at all!

#### Reference

Alchin, R. (2003). :: ThoK :: ten tips ... :: [Electronic version]. *Uwcac n/board*. Retrieved on May 25, 2006 from <http://uwcac.org.uk/acad/thok/tentips.htm>



# :: ToK :: Six Steps ... Essay ::

## Six Steps to Writing a Good TOK Essay: A Student Guide

by Eileen Dombrowski

### 1. Select a Title from the list provided by the IBO.

Do not instantly seize upon a title that sounds appealing and plunge into it headlong. Instead, **read** carefully all the titles on the list. Which one allows *you* to demonstrate best your understanding of TOK issues and *your* critical skills? Remember, that you may not change the title to something else that you wish you had been asked, but respond to what the IBO has given you.

What are the Key Words or Concepts?

Are there key words of the Theory of Knowledge course in the title – words such as "belief", "justification", or "truth"? Are you clear about what they mean? Are you aware of ambiguities, or of possible alternative meanings? Think back on class discussions and check class notes.

How are the key concepts related to each other? Put the title into your own words to make sure you understand what is being asked.

### 2. Read the instruction and the Marking Criteria. Do not even *consider* skipping this step.

#### a. Read the instructions in the title. What exactly are you being told to do?

What are the Key Words of Instruction?

If you are told to "**analyse**" or "**evaluate**" a claim, then you are supposed to consider the arguments both for and against it, taking into account any ambiguities in interpreting it. Possible responses, are:

"that the claim is justified in these ways or up to this point, but not justified in those ways or beyond that point ... or applies to this Area of Knowledge more fully than the following Areas of Knowledge".

"that whether or not the claim is justified depends on what is meant by one of its key words or concepts, so that if you understand the key word this way (explain), the claim is justified, but if you understand it that way (explain), then it is not".

If you are asked "**to what extent**" or "**in what way**" a statement is justified, then you are being asked the same thing, but in different words. If you are being asked a question directly ("Is *x* true?"), your response must still take the same approach considering to what extent or in what ways you consider the answer to be *yes* or *no*.

If you are asked to "**compare**" Areas of Knowledge, Ways of Knowing, justifications, methodologies, or the like, you are being asked to examine both similarities and differences in response to the title. Possible responses, are:

"that the claim in the title is justified to some extent when applied to the Areas of Knowledge / Ways of Knowing / justifications / methods (similarities), but that the claim falls down and is not justified when applied to the Areas of Knowledge / Ways of Knowing / justifications / methods in the same way (then explain the differences)".

"that the Areas of Knowledge / Ways of Knowing / justifications / methods of the title share *this* and *that* feature of knowledge, but diverge in *this* and *that* significant feature, so that the implication in the title is either upheld or refuted".

If you are asked "**how**" something is achieved (knowing, justifying, drawing distinctions), you are usually being asked about a process or a method, and might respond by outlining steps to be taken and/or difficulties to be overcome. In some cases, the "**how**" question is simply a variation of "**in what way**?" – and that question is in turn a variation of "**analyse**".

Ultimately, all titles in Theory of Knowledge, no matter how they are phrased, ask you to do the same thing. You are being asked to *think critically* about major issues of knowledge.

- b. Now look at the general instructions that apply to all the titles, regardless of what the keywords words within them may be. These instructions tell you exactly what you are expected to do in your essay:  
"Remember to centre your essay on problems of knowledge and, where appropriate, refer to other parts of your IBO programme and to your experiences as a knower. Always justify your statements and provide relevant examples to illustrate your arguments. Pay attention to the implications of your arguments, and remember to consider what can be said against them. If you use external sources, cite them according to a recognized convention. ... Examiners mark essays against the title as set. Respond to the title exactly as given; do not alter it in any way".
- c. Now read over the Criteria according to which your essay will be marked ("External Assessment Descriptors"). Pay attention to the description of the top mark in each of the six criteria in order to set your goals of the appropriate essay. (It does you little good to play a brilliant game of football if you are being assessed on playing tennis). Note that the first two Criteria ("Knowledge Issues" and "Quality of Analysis") are emphasized in importance by being given double points. Note that treating the Problem(s) of Knowledge implied by the prescribed title is at the core of the Knowledge Issue(s) criterion, and that analysis and evaluation are at the core of the Quality of Analysis criterion.

### 3. Gather your ideas.

- a. Now look back to the title you have chosen and start to identify the Problems of Knowledge that it raises. This is a crucial step. (Look at the descriptions of the zeroes in the Assessment Criteria!) Do you understand clearly what a "Problem of Knowledge" is? **Remember** that a Problem of Knowledge is not a problem at all in everyday sense of the word unless you expect knowledge to be simple and certain (and then the problem may not be in the knowledge but in your expectations). **Uncertainties** and **difficulties** are an integral part of our search for knowledge, and may even (depending on your values) make it more humanly interesting. Do not treat an Area of Knowledge as inherently inferior if it is more difficult to assert that we can know something in that Area than in others.
- b. Think about how the Problems of Knowledge raised by your title are relevant to different Areas of Knowledge and Ways of Knowing. Do all cultures see these problems in the same way? What comparisons can you draw, what general conclusions do you reach, and what arguments can be made against those conclusions? What are the implications of your main points? Can you find examples to illustrate your arguments? Counter-examples? Note down your ideas quickly, without trying to structure them yet. Write until your mind runs dry. It will.
- c. Now enrich your immediate ideas by going back to your notes from your **TOK Journal** to remind yourself of class discussions and material which are relevant to your title. To illustrate your points, gather examples from notes and texts from your IB courses, the media, people you know, your personal experience, and other relevant sources. Keep track of the sources you gather in this stage, so that you can include them as citations later if necessary. Remember, though, that the TOK essay **is not** a research paper. You will not find your response to the title in a book; books and other sources give only the raw material which you must shape into your own response.
- d. If time allows, you may want to live with your ideas floating in your mind for a week or so at this point, gathering more as thoughts hit you in class, your CAS activities or elsewhere.

This step of gathering ideas is often challenging - and extremely enjoyable. It is a chance to engage your own mind in considering the central TOK question: "*How do I know?*" If you find ideas interesting or like to reflect on what beliefs or knowledge your life experience has given you, you will probably find this stage of the essay personally stimulating. Moreover, you will be given credit in your essay for pulling together the relevant ideas in a way that reflects your own thinking.

### 4. Organize your ideas in preparation for writing.



Now comes probably the greatest struggle of the essay - to move from scribbled notes to tangible ideas to a plan of the essay that organizes a sequence of arguments which respond clearly to the title.

As you put your ideas into related groups and shuffle them into order, you should identify your **THESIS** – that is, the central point or argument which you want to make in your essay. *Distill it into a single sentence and write it at the top of your plan.* Make sure that every subsection of your essay develops this core idea in some way, including considering counter-arguments to it.

There are many possible ways of structuring ideas in an essay, depending on the topic. Play around with an outline or mind-map until a sequence comes together. There is no formula for a perfect plan. The only essential requirement is that the sequence of ideas must develop your thesis, which in turn must respond to the prescribed title.

5. **Write the essay.**

By now you have done extensive thinking and planning - but you still do not have an essay! The actual writing, though, is only a small part of a good essay and if you have prepared well it should be straightforward. Keep the following points in mind as you write and revise your draft:

- The marking criteria favour a concise introduction. Know where you want to go and don't use up hundreds of words just getting started.
- Try to develop ideas in proportion to their importance in your overall plan. Your essay must be between 1200 and 1600 words in length, so control the degree to which you expand on an idea as you go. Doing so is not easy, but it is easier than trying to readjust a whole essay at the end.
- You are expected to clarify concepts as you go, defining terms if necessary. *Do not*, however, pad out your essay with definitions of terms which are not particularly ambiguous. *Do not* drop into your essay lumps of definitions which contribute nothing to your argument and are ignored thereafter. *Do not*, above all, use a dictionary definition to bypass complexities: no teacher or examiner will be impressed if, after a course in which you discuss possible understandings of "Truth" or "Knowledge", you 'solve' this Problem of Knowledge by plunking down a citation from a dictionary as if you have thereby settled the matter!
- Select your examples from a wide variety of sources and cultures. Make sure, moreover, that they really do illustrate the points you are making. A reference to the Copernican Revolution and Galileo, for example, might not demonstrate an understanding of revolutions in thinking within contemporary science. Is there no other example you might find in science of the past 400 years?
- You are welcome to use "I" in a TOK essay. If you are speaking about your own experiences or beliefs you will probably want to do so.
- Check the facts. Are your assertions accurate? Acknowledge the source of any quotation or unusual pieces of information, using accepted conventions of footnotes and bibliography. (If in doubt, it is better to footnote too much than too little).
- Make sure that your conclusion is coherent with the arguments you made. There is no "right or wrong answer" to a prescribed title: your essay will be evaluated upon the strength of its arguments. An effective conclusion must reflect those arguments.
- Cut out anything that is not truly relevant, and ensure that your essay satisfies the word length requirement.

Main

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Eileen Dombrowski is an examiner of Theory of Knowledge for the International Baccalaureate Organisation and author of *Theory of Knowledge - a Students Handbook* (2005, Oxford University Press, Oxford).  
(Essay advice first printed in Forum 44, November 2000, pages 3-5).

# :: ThoK :: Ten Tips ... Essays ::

## Ten Tips on Writing a Good Theory of Knowledge Essay (1)

by Nicholas Alchin

There is *no* general method or formula that is 'correct'. You can probably ignore some of this advice and still write a good essay ... – but following it may help.

- 1. Familiarise yourself with the Assessment Criteria:**  
notice, for example, that
  - i. your examples should be varied and culturally diverse,
  - ii. you will lose marks if you do not properly cite any sources you use,
  - iii. you need a clear introduction and conclusion.
- 2. Do not get bogged down in definitions.** While it is important to know what you are talking about, you could waste a whole essay in trying to, say, define 'truth'. Also, dictionary definitions are not always helpful - if a dictionary says that "reality is that which is real" then what does this tell you?
- 3. Make distinctions between different Areas of Knowledge and different Ways of Knowing.** You should avoid making claims that apply to all aspects of knowledge - because different Areas of Knowledge or Ways of Knowing 'work' differently, and what is true for example maths is unlikely to be quite right for example biology.
- 4. Do not make grandiose but rather meaningless claims.** The best (or worst) one I have seen was something like "*Since the dawn of the universe, truth has haunted mankind*". The same sentiment (if I understand it correctly, which I may not), would be much better put as "*Humans are a curious species, always seeking the truth*" (which may still be an exaggeration).
- 5. In your introduction spend a few lines explaining the question,** and clarifying how you are going to interpret it. You may want to offer a position that you know is wrong, and explain why it is wrong, perhaps developing it into a better one. For example, one essay title was based on a quote from C.S. Lewis: "What I tell you three times is true". A possible Introduction might be:  
"Lewis' quote seems, at first sight, to be ridiculous. If I tell you three times that I am an Alien, or that  $1 + 1 = 5$ , you are unlikely to believe me. Mere repetition is not enough. However, if I ask you how you know that Canberra is the capital of Australia, it may well be that you know it simply because you heard it several times. In other words in this case, repetition is enough. So perhaps there is some merit in the claim, depending on the particular Area of Knowledge in question."
- 6. In your introduction try to provide some 'signposts' that indicate what you will be trying to do in your essay.** It is much easier to follow an argument when you have a vague idea where it is headed, but you should not spell out the whole thing. Following on from the example in 5 above, the next sentence might be:  
"In this essay I shall attempt to see under what circumstances repetition becomes convincing, and by looking at the Natural Sciences and empirical knowledge in
- 7. Use your own examples to make your points.** These can be taken from your IB subjects, your everyday life, newspapers and so on. Try not to use rather tired examples of say, the flat earth as an example of an error that everyone believed, or Hitler as an immoral person. Also the best essays do not spend a great deal of space describing examples, but use them often almost in passing to make an analytical point which can be developed.
- 8. Remember that your essay is an extended argument – not a collection of several loosely related points.** Your essay should move from point to point while always extending the argument and clarifying the nature of your answer. Try to develop a narrative or theme that will link paragraphs and points together smoothly. This may well not be a simple matter and is likely to require a great deal of thought, but it does mean that you can make the essay your own. Find your own theme and address the issues in a manner that interests you and means something to you.
- 9. Try to develop an abstract as you write your essay.** This is really to help you with point 8. An abstract is a one-paragraph summary of your argument - and if you cannot explain your argument briefly then the reader will have no chance of understanding it. The abstract should not be included when you have finished the essay, but the act of writing it should help retain clarity over what it is that you are trying to do. It is very easy to get lost in TOK essays; the abstract is a way of sticking to the argument that you want to make.
- 10. In your conclusion try to summarise (very briefly – one or two sentences) what you have said, and try to end with a forward-looking view.** This might be an explanation of exactly why you were unable to answer the question, or what you would need to know in order to answer the question. Do not just reiterate your arguments. The final paragraph should 'feel' like a conclusion and not leave the reader hanging in mid-air:  
"It seems then, that the nature of our senses implies that we will never have access to the 'real world' (though as we have seen, 'real world' is a highly problematic phrase). Some people may feel this is a great disappointment, while others may not care, but it is certainly humbling to note



general, I hope to show that Lewis is absolutely right in certain Areas of Knowledge, and completely wrong in others."

that even in this advanced age, for all our scientific expertise and high-tech machines, we will never know reality."

Given that several of the Problems of Knowledge that you identify may apply to the essay you are writing, you may wish to acknowledge the irony of taking up a position at all!

[Main](#)

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Nicholas Alchin is the Chief Assessor of Theory of Knowledge for the International Baccalaureate Organisation and author of *Theory of Knowledge - Student's Book* (2003, Hodder Murray, London).

The above advice was originally published at a TOK Conference in Madrid, 2003.

## Annotated Theory of Knowledge Exemplar

#4 “One definition of knowledge is true belief based on strong evidence. What makes evidence ‘strong’ enough and how can this limit be established?”

There are many definitions of knowledge in our language and it is often difficult to define it because the answers are ambiguous. One philosophical definition of knowledge is "justified true belief" by one of the greatest Greek philosophers, Plato (1961). According to him, with belief in something, justification for believing it, and if it is true, our belief is knowledge. Therefore, one cannot "know" anything without justification, standing as a proof to remove doubt. I will examine the Areas of Knowledge in math and natural science to support his definition. In addition, I will define what strong evidence means and the limits to what is considered strong. The Ways of Knowledge I will be approaching is language and perception. The Problems of Knowledge that I will be considering is the vagueness of definition and the limitations in both deductive and inductive logic.

The first Areas of Knowledge I will be discussing is math. Math is based on deductive logic that is reaching a conclusion guaranteed if all conditions are met. The fixed conditions are that there is enough evidence, reasoning, and works 100% of the time. To be considered mathematically true, we have to know the outcome before actually performing it. For example, everyone knows that  $1 + 1 = 2$ . It is testable over and over step by step and we know strongly from evidence proved in the past that the outcome will be always come out as 2. No interpretation is necessary in this simple mechanism. As a matter of fact, perception is not necessary here because math only deals with rules. The strong evidence supporting the validity of the answer is that theorems, equations, and laws are known to be true in mathematics because they have passed the strict judgment by the referees. However, this is not always the case. For instance, when we use base two,  $1 + 1$  may turn out as 10, not 2. There is a problem in how we define the principle. Take another example that demonstrates the problem with deductive logic; I went to a grocery store last week and found stacks of apples priced equally 100yen. In terms of value systems in math, the apples are worth equally the same. However, just by looking at it, I could deduce that not even one of the apples looked the same looking different in terms of its shape, size, and bruise. There is a problem of deduction in this example. According to deductive logic the apples have equal values, but in reality I used my personal perception to determine which apple was worth more. Summarizing what I said, although the deductive logic in math is theoretically true, however, we can not always apply it in terms of reality because of limitations in deduction: sometimes math theory is divorced from the real world.

Good evidence in math is not always based on deductive logic. This statement is supported when we look into statistics which are based on inductive logic. In statistics there are limits to what

It is usually unwise to take an internet quote—when the purpose is to explore your own knowledge.

The writer has wisely written this introduction AFTER writing the essay—greatly simplifying the reader’s task.

The writer uses TOK terms—especially AoK and PoK—suggesting high marks for criteria A and B.

The discussion of perception as a “way of knowing” (not as a “point-of-view”) is highly effective.

The counter-claim of base-two math shows both the PoK of using deductive logic and an academic understanding.

The personal example shows the candidate’s ability to use ToK in real-life situations.

For criterion B, the candidate develops a lengthy counter-



extent we should consider strong evidence is. They are called confidence levels. In a chi-squared test, say we first propose a hypothesis and set a confidence level of 5%. Then we make an alternative hypothesis. The confidence level allows us to reject or accept the original hypothesis if the result is true for 95% true for all cases. In statistics, being confident 95% of the time is pretty strong evidence. However, there is a problem again. There is a problem that statistics, even probability, is not true for all cases. In the beginning, I mentioned that deductive math is correct 100%, however, I now think that we cannot be certain about the constancy of the results gained in the inductive math of statistics. To what extent would I be certain if there might be a 5% chance of an error?

In the second Areas of Knowledge I will be discussing the field of natural sciences, particularly biology. Scientific investigations are also based on inductive logic, that is, reasoning is used to reach a conclusion from a set of assumptions and observations. Knowledge in science is basically obtained through reproducible experimentation which supports or falsifies the hypothesis. Although we should be consistent with our knowledge in science, we can never prove anything for 100% because scientific knowledge is always tentative. There are always uncertainties as errors may occur. For instance last month in biology, we did a lab report about how the allele frequencies in a population changes under fixed conditions. The process began by creating a hypothesis using our prepossessed knowledge. I predicted that the frequency of a recessive allele of certain population would be about 7% using the Hardy-Weinberg equation (Speed, Wicks, 1998). Although I was sure that the outcome would come as predicted, it actually came out different. I was convinced that what I see with my eyes are not necessary correct. I wrote in my lab notebook that reasons of disparity between observed and expected values were due to my errors and misinterpretation of the data. Even if by coincidence my assumption was correct there is no good evidence to backup my claim.

In science, the limit for strong evidence requires multiple trials of the experiment. Thus, with more trials and if the results come out the way you expected, even though the scientists are not certain, scientists become more confident about scientific justification. However we may have a problem again as some scientists publish their work based on a limited biased sample. Judging by one trial and sample, it is difficult to say whether findings are true for all cases in science. Take the example of Dolly, the cloned sheep. Out of the 277 trials that the scientist conducted, there was only one success (Love, 1997). The testing was not repeated enough times and consequently the scientists of the "Roslin team knew from previous research on embryo transfers that the transfers don't always work (1997)." Success have depended on chance. Even when cloning "works" sometimes the clones are born with deformations. As a matter of fact, even the "successfully" cloned, Dolly died prematurely that it is questionable whether we can even

example—and attacks it with PoKs as well.

The incorrect use of words such as “extend” here, are NOT penalized in ToK. The only problem comes if language becomes unclear.

Here the candidate points out a link between math and science—both use logic, but while math uses deductive logic, science uses inductive.

This use of a personal, “in-class” academic example shows an ability to apply ToK to the candidate’s own schoolwork.

The citation is not standard, but does reveal the source of the information.

Here the candidate discusses the second half of the question—explaining the limit of “strong evidence” in science.

The “Problem of Knowledge” in a specific case points out the tentative nature of our knowledge in science.

call its creation a success (1997). Therefore, from the preceding reasons, we cannot suddenly jump to conclusion that cloning would work successively with human beings as well simply by inferring what seems to be correct from the knowledge we possess unless there are enough scientific justifications to soundly substantiate it. With further knowledge, one's conclusion can be often refined. The heavy risk factors involved in this experiment make cloning such an unpractical method in the real world. At this moment, despite more and more details, the cloning of animals is understood poorly and does not provide a good evidence in terms of inductive logic. Moreover, when it comes to a molecular biology level, the limitations become obvious as scientists rely on theories for reasoning because they cannot count every single allele of a population. It is impossible to look at all cases due to the time factors and that it cannot be done by the technology we have today.

The paragraph consistently looks at PoKs.

The candidate also considers the logical implications of her argument.

Although theories are helpful to reach a conclusion, in the next example I would like to point out that scientific beliefs can change as function of time. Although it was believed that certain stones fell from the sky by some early cultures, scientists dismissed the idea as mere superstition or hoax. In the mean time, isolated cases of witnessing of stones falling from the sky have been reported continuously. "In 1794 Ernst Friedrich Chladni, considered the father of meteoritics, published a book in which he concluded that stone and iron masses did fall out of the sky and were associated with high speed fireballs. Because of the hundreds of eyewitness reports that were coming in, many scientists were beginning to accept these conclusions. In his book, however, Chladni took the next great leap and concluded these objects could only come from space. For this he was immediately ridiculed, then ignored (Meteoritics, 2002)." Most people didn't believe that rocks fell out of the sky previously; however, with the reveal of new evidence scientists all of a sudden decided to change their mind. This example clearly "reflects the mindset of a scientific community struggling to reconcile observation with entrenched belief (2004)."

This example is especially well-chosen, as it points out that the PoK of how previous interpretations cause scientists to look at evidence in a biased way. The example could be more effective, if the candidate pointed out this PoK by name.

As Plato defined knowledge as "justified true belief," justification has a big role of standing as an evidence. It is true that with better evidence one is more justified with his/her beliefs. However, it does not always mean that every evidence works. My personal definition of strong evidence is consistence, simply explained, and accurate. Examples in the fields of math and natural science inspired me to come to conclusion that true belief based on strong evidence is a good definition, however, not always the case. Simply knowing the facts and having the evidence was merely a part of formulating knowledge. We are convinced that knowledge is, therefore, difficult to find because there are too far limited things that we can obtain knowledge of. After all, there is no universal explanation of knowledge because it differs in the individual's biased mind.

The conclusion suggests some uncertainty, but it could make clearer links between the two AoKs discussed and assess the AoKs' important differences with regard to the essay question.

The word count is a little short—a few ideas could have been fleshed out

Word count: 1526



more.

### The List of Works Cited

- Guthrie, K. (2004, February). Chi-squared test [Lecture]. Canadian Academy, Room N409, Kobe, Japan.
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- Plato. (1961). The Collected Dialogues of Plato (Cooper, Lane Trans.). Princeton: Princeton University Press. (Original work published 1871)
- Speed, T.P., Wicks, J. (1998 April). Hardy-Weinberg Equilibrium [Electronic version]. The University of California Berkeley: Department of Statistics. Retrieved December 9, 2004 from <http://stat-www.berkeley.edu/users/terry/Classes/s260.1998/Week5/week5/node1.html>

Fine inclusion of classroom material in the references—however, some of the citations above are missing dates—or page numbers.

Criterion	Mark /5	Comments
<b>A: Knowledge Issue(s) (10 points)</b>	9/10	For the first half of the essay, the writer consistently focuses on Problems of Knowledge. That becomes less so toward the end—and less effective in the conclusion.
<b>B: Quality of Analysis (10 points)</b>	9/10	The analysis is well detailed and persuasively illustrated with carefully chosen examples. The specifics and thought breaks down only in the conclusion.
<b>C: Breadth and Links (5 points)</b>	4/5	The candidate shows links between the different AoKs—but only in one paragraph. Other links could have been made with the final 74 words.
<b>D: Structure, Clarity and Logical Coherence (5 points)</b>	5/5	The topic sentences outline the argument clearly—moving the reader through from point to point. The ideas are focused on the question throughout the essay.
<b>E: Examples (5)</b>		The examples are both academic and personal. A

<b>points)</b>	4/5	non-western example would be good as well.
<b>F1: Factual Accuracy (3 points)</b>	3/3	The paper is based on facts, and the facts are accurate.
<b>F2: Citation (2 points)</b>	1/2	The lack of page numbers for Plato make it difficult to track down the writer's citations.





## 4. The TOK essay

*“Once I got used to theory of knowledge, I enjoyed writing the essays because I found that they were an opportunity for me to think for myself about the way I was building up my knowledge and values. Writing a TOK essay was my ‘me space’ for reflecting on a very wonderful but confusing world of knowledge and issues around me and to decide what is and what is not most important. My final essay was a chance to calmly evaluate some of the knowledge I’d discovered on my diploma!” (Isobel)*

### Unpacking a strange bag

We have described the TOK course as a voyage over the sea of knowledge. Now, we will liken the two TOK assessment tasks to two different types of bags for the voyage. The essay title can be understood to be a bag of things provided to you. Each title, then, is like a bag provided for your convenience by a shipping company. This bag will contain somebody else’s idea of essential articles for your voyage, such as toiletries, soap or shampoo. Your job is to unpack the bag, identify its contents, and then build a display (your essay) that explains how the bag’s contents can be understood in terms of, and applied to a part of, the knowledge sea. The TOK prescribed titles are a collection of 10 bags from which you must try to choose the one that is best for you. A bag provided by a stranger might at first seem strange but, on opening it, you will soon find items that are familiar to you, like those in the bag described above.



Figure 4

### The essay process

You might be tempted to grab the first likely looking title and start writing, but we suggest that you approach the task in five stages:

**Unpack** the 10 titles → **Choose** your title → **Brainstorm** the elements to include → **Plan** out the essay → **Write** the essay

We will concentrate mostly on the first three of these stages for two reasons. First, we believe that, if you unpack the titles carefully, choose the one that suits you best and brainstorm what to include well, then you are very likely to do a good job of the planning and writing. Second, we can offer general procedures for these first three, but how to plan and write your essay will depend quite a lot on the details of your unpacking and brainstorming.

### Unpacking the titles

Before choosing your TOK essay title bag, you will need to know what each of them contains. The 10 titles offered cover a range of focuses and styles, each indicating different knowledge issues and inviting different considerations when you write your essay. Although the outward appearance of some of the titles may appear daunting at first, you will find when you unpack the “bag” and look more carefully that you come across very familiar TOK contents such as the AOKs, the WOKs, the attributes of knowers, or key TOK concepts such as certainty, reliability, truth, validity, context or culture. It makes sense to take a careful look through the 10 title “bags” and pick the one that suits you and your understanding of TOK best. Don’t choose a bag whose contents are unfamiliar to you!

### Know what can be found in titles

To begin unpacking a title, you need to open the bag and turn out the items that you find inside. You then need to identify which items are essential ones. Just as any bag would have features that allow us to identify it as a bag, all TOK essay titles share basic features with other titles. They all:

- arise from the TOK course
- contain references to key TOK elements (AOKs, WOKs, and/or TOK-related terms)
- contain action terms (words that indicate to you what your task is)
- point to or state knowledge issues
- allow different, equally valid, approaches in the essay.

In addition, some allow a certain amount of ambiguity in how

the title (or some key term) is to be understood, or are based on certain assumptions with which you may not agree.

Unpacking the title means examining, clarifying and exploring all these central items in each particular title. Later in this chapter, as exemplars, we take you through a process of unpacking the essential features and requirements of five essay titles from the November 2007–May 2008 prescribed title list. We will also illustrate the brainstorming phase, and provide you with actual essays and essay extracts (written by previous students), accompanied by commentaries to show how marks were gained and lost.

Many of our unpacking suggestions can be applied to any TOK essay title, whereas others are more pertinent to certain titles. Therefore, we also take you through the more individualized aspects of each essay title type. You can then apply our guidelines to unpacking, choosing, brainstorming, planning and writing your own essay. As not all bags are identical, neither are all TOK essay titles. We will identify several different common essay types in the next section. Knowing which essay type you have chosen will help you apply these guidelines to your particular essay title.

### Essay types

Many essays will fall into one of four different types with somewhat different emphases. Recognizing the type may assist you to unpack, address and answer the prescribed title. Below we give you examples of the four types from previous prescribed title lists.

1. Titles that focus on a TOK-related term (or two), asking for evaluation across AOKs and/or WOKs.
  - “When mathematicians, historians and scientists say that they have explained something, are they using the word ‘explain’ in the same way?” (Title 1, 2006–7)
  - TOK-related term: explain. AOKs: mathematics, history, natural science.
2. Titles that focus on an area of knowledge (or maybe two) and require comparison or contrast between AOKs or across WOKs, generally looking at a TOK-related term (or two).

“It is often claimed that scientific results must be replicable.



## Examiner report

**Criterion A:** (4): The student makes some very encouraging claims about the KIs raised by the title, such as that a central KI regarding intuition is a “subjective” means of attaining knowledge or that intuition is about being able to perceive, judge and access truth in a very “personal” manner. However, through most of the essay these views on intuition, and KIs related to it, are not clarified and neither are they supported. There are even interesting and relevant KIs that are brought into the conclusion, where they can only be mentioned, not examined or explored in any way. Therefore, in general, KIs are identified, but they are not adequately addressed or treated.

**Criterion B:** (3): The student provides several examples and also does mention perspectives (spiritism); however, very little explanation is provided and, indeed, the discussion is sometimes confusing so obscures rather than clarifies the relevance of the example. The student often provides insufficient clarification of how the examples (the novel *The Things They Carried*) clarify and support the KIs that have been identified. Far more

explanation and justification should be provided for the claim that intuition is found in religion.

**Criterion C:** (2): Unfortunately, the quality of analysis is such that it can be noted in terms of how little there is. The student tends to develop the essay in a very descriptive manner. It has already been noted that, regarding KIs, there are few attempts to justify the points made regarding them. There are also many unsupported assumptions made (intuition present in spiritism, the lack of intuition in mathematics). The student provides almost no counterclaims to balance the claims made, thus contributing to the lack of critical analysis.

**Criterion D:** (2): Although the essay is fairly well organized in terms of structure, the discussion that the student develops is often irrelevant either to the points made (intuition is not found in mathematics, it is found in religion) or to the KIs highlighted in the title. It is not always easy to follow the discussion the student provides or to understand what the student intends by making certain points (intuition is subjective) or by giving particular

examples (spiritism). Finally, the student provides only very partial referencing, so does not fully acknowledge ideas and sources of information.

Overall ...

Although the essay does make some initial points that seem to address the title, the ensuing discussion of KIs, through examples such as spiritism and contexts such as religious belief and practice, is too inadequate in terms of the clarity, depth and breadth of the inquiry in order to be considered as adequate treatment of KIs implied by the title. How do you think the student could more fully support the qualities and connections claimed for intuition? Could the student have given better examples and a more adequate explanation? The low marks gained by this essay show that examples and perspectives given should be fully clarified and supported in order to develop a genuine critical inquiry that addresses the KIs.

## This extract was taken from an essay that achieved 16/40, a grade D (A = 4, B = 4, C = 3, D = 5)

The student refers to historians' use of educated and natural intuition, but does not clarify or explain how or why this would involve intuition. Apart from a brief mention of primary and secondary resources, there is insufficient treatment of the historian's approach and methodologies.

When considering how knowledge tools are used in any particular AOK, explore in detail, referring to the common methods of the discipline.

History seeks to study and explain the significant events of the past on the basis of currently existing evidence. Although History is based, in part on primary sources, they are interpreted from a limited point of view. It is impossible to achieve a completely objective view of the past. Natural intuition would play a bigger part compared to educated intuition in History. Historians would probably use their educated intuition in order to do their work efficiently. But in terms of the understanding of the past itself, from the limited primary and not completely reliable secondary sources, historians would attempt to use their natural intuition to interpret the past. However, this interpretation cannot be deemed as a complete certainty. As an example, how would you interpret an ancient situation of a culture: the woman was sitting

The example is plausible, shows an individual approach, and is used effectively. But is it real? If so, where and when? This should be referenced, if not, then its hypothetical nature undermines the argument.

Provide relevant detailed information when developing an example. Vagueness and generalization do not help the development of meaningful discussion in an essay.

The jigsaw puzzle comparison is too vague to clarify the differences between “educated” and “natural” intuition.

Examples must contribute to the analysis.

## This essay achieved 21/40, a grade C

The student does not support or clarify the first claim: How is intuition about “getting information without relying on the senses or reasoning”? No clear counterclaim is provided.

Explain the claims that you make as a way of supporting them [D]. Could you argue that there are strong counterclaims to the statement [C]? Try arguing against your initial claim to provide a counterclaim.

The student clarifies the AOK that the essay proposes to look at (D). However, they offer their opinion in the form of a conclusion about intuition, but does not support or justify their claim (C).

down on the ground and the man was sitting down on a higher ground. With most current intuition, most people would say that women were of a lower social class. Where in the actual scenario, women were regarded as a higher social being; therefore they were seated on the ground, closer to mother earth. It can be inferred that, intuition needs adequate information, to be utilised. Intuition is like solving a jigsaw puzzle; educated intuition would be a puzzle with complete pieces, able to be solved. On the other hand, the natural intuition would be a solved puzzle with missing pieces—the flaw and the unreliability it holds.

Intuition has many different meanings but the most accepted one is that it is getting information without relying on the senses or reasoning. In my opinion it is impossible to strictly determine whether intuition has a specific meaning in all the areas of knowledge or if it has no importance whatsoever, because certain areas of knowledge are very different and emphasize different ways of obtaining information in different ways. If we take the examples of music, math and history and apply different examples to these areas of knowledge we can see that intuition plays a certain role in all areas of knowledge, but it also varies from area to area.

Mathematics is usually perceived as an area of knowledge based on strict reasoning and has nothing to do with intuition. This makes perfect sense if we take the example of Pythagoras theorem; the way that Pythagoras got to this theorem was through reasoning, already existing mathematical theory and endless calculations. Most of us know that  $c^2 = a^2 + b^2$  and we would all agree that intuition has nothing to do with this theorem. It doesn't matter if 2 people have different opinions on what the value of  $c$  is going to be for the same values of  $a$  and  $b$ , it doesn't matter if the first person thinks or “feels” that the solution is going to be greater than what the second person is expecting it to be, in each case the result is going to be the same and it won't be affected by the intuitive opinions of the 2 people.





The student presents what seems to be a counterclaim regarding intuition in religion, but again really provides no clarification. It is simply a personal opinion of the student's on Catholicism. It has no obvious relevance to the nature of the role of intuition and thus distracts from the main KI of the possible role of intuition in any AOK.

Any personal views expressed need to have their relevance demonstrated, eg by clarifying central concepts.



This personal example does very little to clarify the nature of intuition. Is intuition simply another form of sense perception? The example is left unexamined, other than to compare its presence in spiritism with its absence in Catholicism.



This is the strongest claim made about the nature of intuition: that it is about being able to perceive, judge and access truth in a very personal manner. However, the writer neither supports nor clarifies the claim. Any possible KIs remain unexplored.

Demonstrate the connection of your knowledge claims to the title and to relevant KIs.



It is unclear whether intuition can be a means by which authors can evaluate the effect of their writing. No consistent sense of this key term has been established.

Ensure that you provide clarification of key terms and claims you use, so they further the discussion.



This book is not referenced.

All sources must be referenced fully.

Catholicism are not as intuitive as Spiritism. Catholicism has a more strict doctrine regarding the beliefs and disbeliefs of the religion. For instance, to follow the principles of Catholicism one has to believe in the fact that the Catholic Church descends from the church created by Jesus Christ, the validity and purpose of Eucharist, and the belief in Jesus' divinity among other doctrines.

I personally believe in my senses and perceptions. I have experienced times in my life when I simply knew that my grandfather, who passed away when I was 3 years old, was in spiritual presence with me.

These sensations and intuitions became a very common theme of conversations between my mother, my two sisters and I since I was a child. In other religions, such as Catholicism, intuition does not play a large role as a part of the religion. It may be present on a more personal level, as the feeling or perception that the action of going to church every Sunday is the right thing to be done, because one may feel inner peace and serenity. Intuition is not a part of the catholic religion as an institution as much it is in other religions, such as Spiritism, because Catholicism does not invite you to use your own perceptions of the surrounding world to make your own judgments or decide your own truth. Therefore, intuition plays a very important role in some religions and a not as important one in others, that may not leave as much room for questioning your own existence.

In my opinion, intuition plays a very important role in literature. Literature is a form of art, a representation of the world that surrounds us, that being an imaginary world or a real one. In literature, the author tries to convey messages through the writing. These messages don't always resemble truth or reality and therefore intuition plays a very important role for both the author and the readers. Authors can use intuition as a form to analyze their own writing and evaluate the feelings that the readers could get from it. By doing so, they are able to improve the writing.

The author Tim O'Brien for instance plays with the emotions of the readers in several situations. In his novel "The Things They Carried", O'Brien writes on events about the Vietnam War from the perspective of the soldiers involved. One of his aims in the novel is to make the readers contemplate the fact that personal truth can be created through stories that are not veridical. The author in this case makes use of



The literature example is personal, but vague. The student does not clarify key terms (personal truth, veridical), is intuition about feelings and knowledge, or emotions? The section finishes with an incomplete sentence only adding to the confusion.



The student asserts here that there are several ways intuition contributes to understanding a novel, but with no firm account of the nature of intuition, it is unclear how this would take place.

Any examples used or claims made should be accompanied by detailed analysis and explanation in order that they clarify and explore the KIs.



Stating in the conclusion that you have addressed part of what was required by the essay title will not compensate for the fact that you have not done so.



The conclusion evaluates the very subjective and broad nature of intuition, and also that it is contextual. These KIs should have been further explored during the essay rather than simply acknowledged at the end.

Ensure that the conclusion of your TOK essay successfully identifies KIs that have you have explored fully through examples and discussion in the main body of your essay.

intuition in order to better create feeling and a personal truth for the readers. He uses his own feelings and knowledge of the war to convey to the readers the emotions he chooses to.

For readers, on the other hand, intuition helps to obtain an idea of the message the author is trying to convey. Using O'Brien's "The Things They Carried" as an example, the readers are always trying to arrive at conclusions as to whether his work is a biography that includes real facts and characters or if his purpose is to make us believe in that while it is not actual facts. Intuition plays an important role in analyzing this author because it is a way to know that allows you to interpret the author beyond the level of written words. The intuition takes you to another level of interpretation, making you analyze the feelings that the writing creates in you and whether these feelings are generated by truth or by invented stories.

Throughout this essay I have been able to express my opinions on what role intuition plays in different areas of knowledge. Intuition does not play major roles in areas such as mathematics and the natural sciences. On the other hand, it can be very important in areas such as literature. Regarding religion, intuition depends on the context of the religion and its doctrine and beliefs. In certain religions, such as Spiritism, intuition plays a major role. Through intuition one can decide if they believe in the doctrines and says of Spiritism. On the other hand, religions such as Catholicism impose a more rigid set of beliefs, which people are asked to base their faith on. Intuition remains a very subjective way of knowing, simply because it is based on impression, feelings, emotions and it also depends on the context, which varies in every situation. Whether one can or cannot consider intuition as an important and defining way of knowing is a very personal choice to be made.

Word Count: 1219



**Rephrase the title to check your understanding**

Having thought about all the above, now is the time for you to make sure you understand the intent of the whole title. One way to do this is to try to put it in your own words. Here is one possibility.

Come to a considered and supported opinion about how people may use intuition to gain knowledge in different professions and pursuits that belong to different AOKs

This is just one way the question could be rewritten. It focuses upon the people who may use intuition, how they use it, why and the activities in which intuition may have a role for them. Your unpacking of the terms may be different from this.

**Identify the knowledge issues:**

The title very clearly raises the KI "What is the role of intuition in different AOKs?". However, to address this question you are very likely to encounter others, such as the following:

- What exactly is the nature of intuition?
- Are there different types or kinds of intuition?
- Does intuition enable knowledge to be gained with a degree of certainty?
- Can intuition clarify the nature of human experience and the role of subjectivity in the knowledge process?
- What is the relationship between intuition and other WOKs?

**Brainstorming****Consider AOKs and WOKs**

The title mentions AOKs. Does intuition have a role to play in all AOKs or only in particular AOKs? Which AOKs will you concentrate on?

What is the relationship between intuition and other WOKs?

Is intuition a WOK in its own right or is it an aspect of one of the four main WOKs?

What does the way we use language when referring to intuition reveal about the nature of intuition?

**Make claims and develop perspectives using authentic examples to illustrate and support your discussion:**

**Provide your own examples** of intuition at work in different AOKs.

Intuition is clearly related to how we know things and the title asks you to consider AOKs.

Try to find examples based upon your own experience or that of others. One way to compare different AOKs is by considering professions that look at similar occurrences through different AOKs—a firefighter with a combustion chemist, or a horse trainer with an artist who paints horses.

Can you give a conclusive definition of intuition or does intuition need to be identified differently in each AOK?

**Analyse and argue**

**Provide effective counterclaims, counter-arguments and counter-examples** to support them.

You may wish to provide an example of a situation where it could be claimed that intuition is a WOK used by a firefighter or a horse trainer. However, you may later wish to question this with a counterclaim that the firefighter or horse trainer is using inductive reasoning or sense perception-based knowing rather than intuition.

A counterclaim can open the way for in-depth analysis; thus you could follow your counter-argument with analysis of the possible relationship between intuition and inductive reasoning and/or knowing based on experience by means of sense perception. Does consideration of this relationship reveal differences or similarities between the arts and the sciences?

**Evaluate and conclude**

Does intuition have a role to play in every AOK?

Are there different types of intuition, some more relevant to certain AOKs than others?

Are some kinds of intuition more certain and reliable than others?

What is the significance of intuition to the human knowledge process?

**This essay achieved 11/40, a grade D**

Although the student attempts to define intuition (direct perception, immediate apprehension), there is a lack of clarity and explanation or any attempt to explore the terms offered.

Avoid using dictionary definitions unless investigating the roots or origins of a word. Provide your own explanation of terms, if possible illustrated however briefly, by a possible context for the term.



The student relates the KI of intuition's subjectivity to the "role" of intuition in AOKs and cites this subjectivity as a reason why it would have different "degrees of importance" depending upon the AOK.

Once you define key terms, address KIs by considering the implications of those terms and the concepts that they represent upon relevant AOK and/or WOK.



There is no support for the claim that "information that was based upon intuition" cannot solve a mathematical problem.

This "negative claim" is ineffective on account of a lack of in-depth exploration of any relationship between intuition and induction/deduction or mathematics. The student makes unsupported assumptions.

It is very important to fully support a "negative" knowledge claim in the same way as you should do a straightforward "positive" knowledge claim.



The nature of the role of intuition in spiritism is asserted, but not explained in knowledge terms.

Examples should be used to clarify knowledge claims and arguments.

Intuition is direct perception of truth, fact, etc., independent of any reasoning process; it is immediate apprehension. Intuition, in my point of view, is a combination of feelings and senses that lead humans to formulate opinions about known or unknown issues. The fact that intuition is defined as a very subjective way of knowing, leads to the fact that it can have various degrees of importance in different areas of knowledge. To address these differences I will analyze the role of intuition in various areas of knowledge, such as mathematics, natural sciences, religion and literature.

Intuition does not play a very large role in the field of natural sciences and mathematics. These mentioned areas of knowledge base their truth upon forensic proof and therefore require more than intuition to lead individuals to believe. One cannot solve a mathematical problem only by writing down information that was based upon an intuition, there is a need for calculations to show the means by which one could generate the results obtained. Sometimes, the intuition for a right answer can actually be mistaken for previous knowledge. For example, if the answer you have found for a Physics problem shows that the gravity of the moon is bigger than  $10 \text{ ms}^{-2}$ , one may have an intuition that the answer is wrong. This is most likely to be your previous knowledge, a remembrance that the gravity of the moon is not bigger than the gravity of the Earth. Also, concerning mathematics, intuition cannot play a major role due to the fact that ways to know can be deductive and inductive. Both these ways consist of proving your results. In deduction, one is more inclined to the use of logic while inductions consist of trial and error that will eventually lead you to an answer. Neither way has a strong intuitive factor.

Intuition can also have different roles among the religions of the world. In the religion I believe in, Spiritism, intuition plays an important role. Spiritism is a Christian religion that has its basis on the belief of resurrection, spirits and that we, human beings, are in this life to learn and develop our souls. This development is long, and the resurrection is a way to maintain a circle of learning, until a point when our being has developed enough to break out of this circle and join our Father on another level of existence. In Spiritism we believe that spirits are among us, for different purposes and reasons. The intuition and perception for external energies can therefore determine your own personal truth and opinion about the religion. On the other hand religions such as



**Criterion D** assesses the **organization of ideas** in your essay. Here is where working out the “design of your bag” is vital. Before you start writing you should have a detailed plan. You can make sure that your ideas fit together well much better when you are working with a condensed plan than while writing full sentences and paragraphs. At the planning stage, before writing out the essay in full, and again once it is completed, you should check that:

- you have **organized** the ideas you generated in your brainstorm
- your plan/essay **addresses**, in a focused manner, the title you have chosen
- the plan/essay as a whole remains **connected and relevant**, so that the reader can easily follow your overall argument
- you have **explanations** of the key terms you identified when you unpacked the title, and that you use them in a consistent way
- you have an adequate **introduction** (which can give a brief survey of the main line of argument followed by the steps in your plan) and **conclusion** (which should refer back to the introduction and the title)
- you have gathered, and checked the accuracy of, any **facts** and ideas that you need, and kept full records of their sources, to **reference** them properly.

## Now write!

When you are happy with your plan (and you have shown the plan to your teacher, and to anyone else whose judgment you trust for advice), it is time to write the essay. Expand your plan into sentences and paragraphs, then reread and edit your essay to ensure that your writing is clear, and neither ambiguous nor merely descriptive. It's a good idea to ask someone you know, whose grasp of good writing you trust, to read the essay, and highlight for you any places where they had difficulty understanding what you were trying to say. Then work on these bits until they are clearer. This is especially important if you are not writing in your native language. You will not be penalized for linguistic errors provided your meaning is clear, so make sure it is. Check again that the flow of argument is clear, and that you have not confused it with any extras you have added in at this stage.

Make sure that you have correctly **referenced** all **factual claims** (unless they are common knowledge) and ideas you got from someone else (it is, of course, possible to have written an essay that does not need referencing). If your school uses a TOK textbook that you have referred to at any point at all

during your course, you should reference the textbook as a source. Equally, you should reference any other books, magazine articles, websites and web forums that you may have visited, if they have influenced your ideas in any way. Use a standard method of referencing (it doesn't matter which, as long as you are consistent). The bottom line here is that your reader should have enough information to find your sources.

An example of referencing a book or article:

Dombrowski, E, Rotenberg, L, & Bick, M, (2007) *Theory of Knowledge Course Companion*, Oxford: OUP, pp 23–4.

An example of referencing a website:

Garvey, J, (2009), 'The Credit Crunch makes you stupid', <http://blog.talkingphilosophy.com/?p=767>, [posted 3 March 2009, accessed 11 March 2009].

## Unpacking kits and exemplar essays with commentaries

In the section to follow, we take a close look at five exemplar titles. First, to help you understand our advice better, we provide unpacking kits: examples of how to unpack and brainstorm for each title. Studying these will take you through all the steps we have recommended you take to help you remain focused upon the essay title you choose. We emphasize that these unpacking kits are just examples. Under each heading, we raise many issues and pose many questions. A good answer would not be able to—or need to—cover all of these in sufficient depth, but would concentrate on some of them. Equally, a good essay may also address other knowledge issues and use other supporting material that we have not mentioned here. Each heading, however, covers an important element of constructing a solid essay: we advise that you use them to respond in your own way, based on your knowledge and experience.

The unpacking kits show you how to identify and start to address some relevant knowledge issues in a suitably critical manner, using a range of the essay types we identified above. However, they do not show you how to take the material identified in the unpacking and brainstorming stages, and turn it into a plan, much less a full essay. In particular, we warn you against using the unpacking kit pattern as a template for the essay: all it will do is provide an unsorted pile of useful ideas. You will need to organize them into a coherent plan.

Second, the unpacking kit for each title is followed by three complete essays, representing a spread across the mark range. Each is accompanied by three sorts of examiner comments. Comments explain what features of this essay met the demands of the specified criterion and hence contributed to the award of

a higher achievement level. Comments explain what features of this essay contributed to the award of a lower achievement level, and further comments in blue boxes offer more general advice to you about what you can do to show your examiner that you are meeting the requirements of the criteria. For certain titles we have also added extracts, with comments, from essays that offer a different approach to the title.

Finally, in “Appendix 1”, we provide an essay-unpacking/brainstorming form based on the unpacking kits, in case you

would like to use it to help you choose an actual prescribed title, and start to plan your response. Using the table is not the only way to unpack and brainstorm, of course. You may choose to do it on a computer, or blank paper. Moreover, as we have said, this form will not write your essay for you. The contents of your essay should be based upon your own ideas, studies, examples, experience and observations, and following the form will help you gather that material. Planning and writing the essay, however, is up to you. We wish you well!

After reading through the kits, try to use our advice to come up with ideas of your own, for example how would you unpack a title?

### KIT 1

Evaluate the role of intuition in different areas of knowledge.

[Title 1, from November 2007/May 2008]

#### Essay type:

A type 1 title that focuses on a TOK-related term (intuition), asking for evaluation across AOKs (your choice).

#### Identify key words and phrases:

- Evaluate, role, intuition, areas of knowledge

#### Contestable concept:

- Intuition

What do you understand by intuition?

Is it a feeling, an instinct, an emotion, a kind of unconscious perception, a paranormal process like telepathy or something else?

#### Ambiguous words:

- Role

Is the title implying that intuition plays the same sort of role in all AOKs? Or should you understand the question to be asking about the differing roles of intuition?

#### Action term:

- Evaluate

You are being asked to make suggestions about the role (or roles) intuition has in different AOKs and to weigh up the adequacy of these suggestions. For example, is intuition essential in some AOKs, important in others, but of little relevance in some?

#### Assumptions in the title:

- That intuition **has a role** to play in areas of knowledge

Are you going to question whether intuition has any role to play at all or are you going to accept that it does?

If intuition does have a role in an AOK, what is the nature and the extent of this role?

- (Possibly) that there is only one type of intuition

Does the nature of intuition change in different AOKs?



the essential items? How can they be best displayed? What other items will you need to add to the collection, and where? Good planning will ensure that your new bag is well designed in order to hold, carry and display the items effectively.

Although we have offered you some general rules for unpacking, brainstorming and planning a designer essay in response to the prescribed title you chose, it is up to you to fill in the details of the design, drawing on your own experiences, interests, general knowledge and IB studies. Having a good design for your essay—an essay plan—is essential if you want a bag that is as strong and useful as it is eye-catching!

#### Be prepared

- Before writing your essay, develop notes, a diagram or something similar, in which your plan for organizing your ideas is clearly laid out.
- Make sure the main ideas, including your knowledge issue and line of argument, are obvious.
- Show your plan to others—at the very least, to your teacher.

### Writing to the assessment criteria

*"In my final year, my teacher went through the criteria with us and I made sure that I had a copy by me whilst I wrote my essay. It was like using a recipe!" (Inés)*

#### Constructing a useful bag

Since all TOK essays are marked according to the essay assessment criteria, these criteria should be your constant companions. If you are familiar with the TOK essay assessment criteria, you will be more focused and organized in planning and developing your essay. They should give you a clear idea of the essential considerations to have in mind. If your essay is a bag, the criteria are the general guidelines that apply to all well-constructed bags.

We have previously claimed that TOK is like a voyage on a sea of knowledge complexities and controversies. As you journeyed on the TOK voyage through knowledge issues, you have discovered and collected many ideas, insights and messages, and kept them as notes, journal entries, memos, reflections, text extracts or other items. These are a rich collection of your ideas and examples. You now need to locate and access the relevant records in order to construct your essay.

To guide yourself in constructing your bag, study the essay assessment criteria. They can help you to select and organize the complex collection of issues and ideas that you want to address

in your TOK essay. You can think of the criteria as rules for bag making that you can follow to guide the way you assemble the bag. A craftsperson would examine each rule carefully. Like that artisan, regard the TOK criteria as vital guidelines to study and evaluate carefully in order to be very clear about their focus. Remember, the external examiner will use them to mark your TOK essay. We recommend that you make your own summary, to have on hand as you write. If used wisely, the criteria will lead firmly to the final goal—your completed TOK essay!

### The essay assessment criteria

**Criterion A** assesses to what extent your essay shows that you **understand the knowledge issue** or knowledge issues directly related to the essay title.

- When you unpack the title, you should **identify** the knowledge issue(s) related to the essay title. Sometimes, the essay title makes the KIs very clear: for example, "Are reason and emotion equally necessary in justifying moral decisions?" At other times, the central KIs are **less explicit**: for example "Evaluate the role of intuition in different areas of knowledge." This title is more open to interpretation and there are several KIs, including:
  - What is the nature and status of intuition in the creation of knowledge?
  - Does intuition have a role to play in [several named AOKs]?
  - If intuition enables knowledge to be gained within AOKs, is it in fact another WOK?

Either way, **state** the KI you will be addressing explicitly.

- Show your **understanding** of the KI raised by the title through your own expression and perspectives. However, be careful to **address** explicitly the KIs raised by the question. If you do not, your essay will be of a lower standard.
- Of course you can address several KIs, but the order and manner in which you do so will depend upon the **approach** and **perspectives** taken by you, the knower.
- **Use your introduction** to lay out clearly what you take the KIs to be, in your own words: parroting or repeating the title does not show the reader anything. If you are going to focus on a KI raised by the title, but not explicitly stated by it, you need to show the connection between your essay and the title.
- Show both **depth** and **breadth** in your treatment of the KIs, by discussing the nature of knowers, the WOKs and the AOKs and so on—but only to the extent that you can show they

are relevant to the title. "Name-checking", or just making sure that TOK terms get mentioned, is not enough. For example, for some titles it might be appropriate to mention all the WOKs, but for others this might not. **Unpacking** the title well and **planning** carefully will have told you which WOKs you will address, and how you will show that they are relevant.

- To **demonstrate depth**, carefully and systematically **explore** and **analyse** one (or usually more) of the WOKs or AOKs. Show how KIs related to this/these WOKs/AOKs are connected to the title. For example, you might show how natural sciences come up with the conclusion that a table is mostly empty space, or what the essential features of language are, as you are going to use the term.
- **Display** your breadth of understanding by **comparing** and **contrasting** two (or more) WOKs or AOKs in one or more respects, taking note of the particular focus of the title. In that respect, explain how the two are **different** or **similar**. For example, you might discuss how investigative work in science and many valuable works of art both follow and confirm well-established conventional methodologies. However, ground-breaking work is different: radical new art such as some graffiti or conceptual art and revolutionary scientific theories such as quantum theory break conventions. They show how certain concepts or ideas can be understood better by taking a different approach or by making a paradigm shift.
- Overall, you will address criterion A best if you write an essay with well thought-out and systematically presented detail. **Do what you do well**, aiming at depth rather than trying to cover too many WOKs and AOKs.

**Criterion B** is all about your **knower's perspective**, which is, as we have seen, central to your whole understanding of TOK and certainly important in your essay. For this criterion, you have several main, interrelated, tasks. You need to show that you can:

- **think for yourself** about the title's concerns (rather than just copying what others—your teacher, your TOK text, a book you read—may say)
- **link** your own life and experience as a learner to the knowledge issues that you have identified
- **be aware** of how your own viewpoint has been shaped by your own features (such as gender, social setting or type of education)
- **consider** how there may be multiple perspectives and how the issue might be approached differently (for example, by a person from a different culture, philosophical tradition or generation)

- **support** the claims and points that you make by picking out specific authentic examples, often from your own experience either in everyday life or in the areas that you have studied, or from media such as movies, TV, music or leisure pursuits (rather than examples others have used before you). **Check** that each example does make your point clearer

- **convince** your reader that this is your essay, and only you could have written it. Does this mean that you should use the first person ("I think")? Despite the common advice you may hear that "I" should never be used in an essay, writing in the first person can be an effective way to show that the knower's perspective in question is yours, and hence it is fine to use "I" judiciously: that is, reflecting upon your experiences critically, and balancing your perspective with consideration of different perspectives. Note, however, that using the first person is neither necessary nor sufficient for meeting this criterion.
- So, **beware** of the dangers of saying "I think"; you may forget that your opinion always needs to be supported with reasons and explanations, or that you must consider what others think as well.

**Criterion C** looks at the quality of your analysis of knowledge issues. Analysis goes beyond merely stating or describing the KIs. You need to explore them with a high degree of depth, detail and insight. Here are some things to check.

- Whenever you make a **major claim**, you have given the reader reasons to agree with you.
- Your **arguments** should "hang together", so that, if you claim that a conclusion follows from what you have just written, it really does.
- You have **presented** and **developed** at least some counterclaims—alternative views that count against what you have been arguing. Be careful here to make it clear to the reader whose "voice" is speaking: for example, "an opponent of this view might say ...". Remember also that the point of considering counterclaims is to improve your analysis. Try to deal with them, rather than just saying that there are several views.
- Your **essay flows** well: the reader knows where you are going next and why. You signpost these transitions using words and phrases such as "furthermore", "on the other hand", "In history, however, ...".
- Where appropriate, you have told the reader what follows if you are right (the **implications** of your argument) and what underlying claims have been taken for granted by you or others (the **assumptions** on which views are based).



Is this possible or desirable in other areas of knowledge?" (Title 2, 2006–7)

AOK: natural science. Other AOKs: your choice. TOK-related term: replicable.

3. Titles that focus upon a way of knowing (or maybe two), and require comparison with other WOKs or across AOKs, generally looking at a TOK-related term (or two).

"Some people say that religious beliefs can be neither justified nor refuted by reason. However, while sometimes this claim is used as a reason for rejecting religious beliefs, at other times it is used to conclude that these beliefs are established by faith. To what extent is faith a legitimate basis for knowledge claims, in religion and different areas of knowledge?" (Title 7, 2005–6)

WOK: reason. Other AOKs: religion, your choice. TOK-related terms: faith, belief.

4. Titles that focus on an example, quote or general statement, to be explored by reference to AOKs and/or WOKs and/or TOK-related terms.

"There are many different authorities, including academics, politicians, global organizations and companies, who make knowledge claims. As an experienced TOK student, what criteria do you use to distinguish between knowledge, opinion and propaganda?" (Title 1, 2005–6)

General statement: authorities making knowledge claims. AOKs/WOKs: your choice. TOK-related terms: knowledge, opinion, propaganda.

Remember these types, as they will be referenced later in the book.

#### Be prepared

- Systematically unpack each title, so that you know what it would require of you, if you chose it.
- Be aware of different types of title, to help with the unpacking.

### Choosing the title

*"I couldn't believe how difficult it was for me to choose a final title, but when I started to think about what I wanted to bring into my essay and what arguments I would enjoy developing, then I was able to make that choice." (Pedra)*

In picking your title, you are looking for the best match of three things: the demands of the title, the map of TOK you have developed through your TOK course, and yourself as a knower

with certain interests and attributes. Your unpacking of the title will have revealed to you the first. A backward look at your TOK course should show you the knowledge issues in which you have gained experience and developed an interest throughout your TOK course. Reflecting on yourself as a knower, you will have discovered what style of knowing and learning you have gained through your school experiences and your everyday life. Some essays will appeal more to your interests, experience and concerns. To help you choose your essay title, here is a selection of useful questions that you can ask yourself.

- What does each title want you to do?
- Do any of the titles link strongly to matters that your class covered in depth and detail?
- Do any of the titles suit your style of learning, for example, by requiring a more critical and rational, or a more creative and imaginative, approach?
- Would any of the titles allow you to focus on your academic strengths and interests, for example, the AOKs you are doing at higher level?
- Would any of the titles allow you to focus on the WOKs that you prefer to use to gain knowledge?
- For any of the titles, could you draw on your extended essay research, or your CAS activities?
- Would any of the titles allow you to focus on activities and projects that interest you outside school?

What other considerations might help you to choose the best title for you?

#### Be prepared

- Read carefully through the list of 10 prescribed titles. Unpack each to work out what it is asking you to do.
- Discard the titles you definitely do not want to answer.
- Decide which of the remaining titles interests you the most and suits you the best.

### Brainstorming

Now you have unpacked and chosen your "title bag", what next? Clearly, your eventual aim is to write an essay of between 1,200 and 1,600 words on the title, but we strongly suggest that you do not begin writing straight away. Rather, you ought to brainstorm

for ideas, and then arrange those ideas into a coherent plan. Writing the essay will then be much easier—and the essay will be better too.

You can think of your essay as your own designer bag, especially devised by you. Your "essay bag" will have several features. It will be much bigger and more transparent than the title bag that you originally unpacked. You will need to fit into your own essay bag the key items from the title. Each will need to be accompanied by a lot of new items you will supply, such as explanations, explorations, argumentation and examples. It will also have to invite the viewer to see the items from different perspectives, and it will need to contain some counter-arguments. Where will all these come from?

First, we urge you to look back at the way you unpacked the title. Rummage around inside the title again: did you overlook any important contents? Have you figured out which are the key terms from TOK, what the action terms are asking you to do, what the knowledge issue is that you will address, whether the question is ambiguous, whether it makes assumptions you will want to question?

Now, extend your unpacking by brainstorming ideas related to these items. A brainstorm is a time for gathering together items that **might** be useful in your essay. You can start by jotting down ideas related to the items you pulled out of the title bag.

- How will you use the key terms—what meanings will you have for them?
- What is the knowledge issue for your essay? Exactly how might you word it?
- How will you make sure you achieve the tasks demanded by the action terms?
- What exactly does the title mean to you? How can you explain this to others?
- What ambiguity might the title contain? How will you interpret it?
- If there are any assumptions in the title, will you agree with, or question, them?

Next, brainstorm ways of developing your essay. If you have identified AOKs, WOKs and/or key TOK-related terms from the title, good. If they are your choice, which are you going to use? What points will you make concerning them? What examples might you use to explain them? Are there counter-examples? Counter-arguments? How could you introduce different perspectives? Most importantly, what will be your basic answer to the title and its knowledge issue—that is, your major line of argument? You should be aiming to be able to write this in a sentence.

A word of advice on this line of argument. You should come to a definite answer to the title. This does not mean that your answer has to be "yes, definitely" or "no, never". Often, it will be more along the lines of "yes, in some cases, under these circumstances, but no in these other cases" (or some other answer that recognizes complexity). We feel strongly that it should never be "who knows?" or "it all depends on your opinion".

Note that it is by no means essential to follow the order we have used. Brainstorming any one of these items may bring to mind possible items of a different sort. In particular, gathering items will help you develop your ideas on your basic line of argument, which in turn will suggest to you further ideas for the other items. Jot them all down, using whatever method works for you—scribbling on paper, using a mind map, typing onto a computer, or any other way. You are aiming to have many possible contents for your essay bag laid out in front of you, for the next stage: planning.

### Planning your essay

*"I found writing the essay was both like unravelling a ball of wool or making a collage; it was about analysing and argumentation, but it was also far more creative than I imagined it would be!" (Mia)*

### Design your own bag

You have now gathered a jumbled pile of items for your essay bag; what are you going to do with them? To guide your planning, you will need to have a unifying design. The contents of the bag will need to be organized so that they are clearly visible and accessible. The bag will also need to be stitched together well, to carry the weight, as you develop depth and breadth in your essay. Although your essay will be uniquely yours, there are general design specifications that it will need to meet. Apart from the essay title, these specifications are contained in the essay criteria (which we consider below).

While you were doing your brainstorming, you will have been thinking about your line of argument. Sometimes, this will come to you early in the process above, and help guide your brainstorming. Sometimes, it only emerges when you have gathered much other material. Now that you have a good idea of items that might go into your bag, this line of argument is what you will use as your unifying design. Guided by your line of argument, rearrange the items you have gathered into a plan, which leads from an introduction that clarifies how you understand the title and its demands, through a carefully constructed argument, to a conclusion that draws it all together. To meet the title specifications, you need to be very clear about the nature of the objects that you find in the title bag. Which are