Areas of knowledge

How do we know things? We know things because we use a range of methods of inquiry that incorporate ways of knowing to help construct knowledge in different areas of knowledge (AOKs).

The theory of knowledge course distinguishes between eight AOKs:

- mathematics
- natural sciences
- human sciences
- history
- the arts
- ethics
- religious knowledge systems
- indigenous knowledge systems.

Students must explore a range of AOKs. It is suggested that six of these eight would be appropriate.

While this guide identifies eight broad AOKs, students should be encouraged to think about individual academic disciplines, that is, to think about the nature of knowledge in their own specific IB subjects, such as chemistry, geography and dance.

Knowledge framework

One effective way to examine the AOKs is through a knowledge framework. A knowledge framework is a way of unpacking the AOKs and provides a vocabulary for comparing AOKs.

For each AOK the following can be examined:

- scope, motivation and applications
- specific terminology and concepts
- methods used to produce knowledge
- key historical developments
- interaction with personal knowledge.

Within this knowledge framework, key features of each area are identified, as are specific terminology and concepts which shape that area of knowledge. The key historical developments that have influenced and shaped each area are identified, as well as the ways that each makes use of particular methodology. Finally, there is opportunity for reflection on the interaction between shared and personal knowledge in each area. Knowledge frameworks are a very effective device to compare and contrast areas of knowledge.

The idea is that each AOK can be thought of, broadly speaking, as a coherent whole—a vast system with a rich inner structure. TOK aims to explore this structure and to understand just what it is that gives each AOK its particular character. It is also concerned with what these AOKs have in common. A useful strategy is to build a TOK course around comparing and contrasting the various AOKs, to look for features they have in common but also to highlight their differences and pinpoint what gives each its own characteristic flavour.
Comparison of different AOKs is not purely a descriptive task. It is analytical in the sense that the student should link the practices of inquiry to the knowledge that comes out in the end. For example, the reliability of knowledge within an AOK will depend critically upon the methods used to produce it. Making links of this sort is what is meant by analysis in TOK.

**Figure 5**

### 1. Scope/applications

- What is the area of knowledge about?
- What practical problems can be solved through applying this knowledge?
- What makes this area of knowledge important?
- What are the current open questions in this area—important questions that are currently unanswered?
- Are there ethical considerations that limit the scope of inquiry? If so, what are they?

**Figure 6**

This component attempts to explore the range of the specific AOK within the totality of human knowledge and how that knowledge is used. Scope refers to the definition of the AOK in terms of subject matter, and the form that an AOK takes depends critically upon the nature of the problems it is trying to answer.

For example:

- biology studies living organisms and is mainly concerned with how they function
- mathematics is the study of quantity, space, shape and change
- in engineering, however, precise numerical methods are a matter of life and death
Areas of knowledge

- music might not seem concerned with solving practical problems at all but the composer has to solve the "musical engineering" problems of building a piece of music; it has to be a unified whole and yet at the same time there has to be some sort of inherent contrast there to provide tension and energy and, for the listener, interest.

Exploration of the scope and applications of a particular AOK can lead to interesting discussions of the ethical considerations that have to be taken into account. Practitioners in a particular AOK might not be permitted to explore all the aspects that are of interest. There might be moral and ethical limits on the sort of investigations they undertake and experiments they perform.

2. Concepts/language

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<thead>
<tr>
<th>Knowledge framework</th>
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<td>Scope/applications</td>
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<td>Concepts/language</td>
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<td>Methodology</td>
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<td>Historical development</td>
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<td>Links to personal knowledge</td>
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Figure 7
This element explores the way in which language is used in the production of knowledge in each AOK. The key idea is that language does not just communicate pre-existing "non-verbal" knowledge but that, in many cases, the language used actually constitutes knowledge. Take language away and there is nothing left. One of the reasons for this is that the language names concepts—these are the building blocks for knowledge. An AOK is a system of relationships between its key concepts. Different building blocks build quite different AOKs and produce different ways of thinking about the world.

For example:
- in physics key concepts include those of causation, energy and its conservation principle, field, charge and so on
- in visual arts we might be concerned with the colour palette, texture, composition, movement, symbolism and technique
- in music the central concepts might be melody, rhythm, harmony, tension, relaxation, texture and colour.

Discussions of the concepts and language that shape an AOK can link well to discussions about shared knowledge. Language allows knowledge to be passed on to others and to be accumulated over time for future generations. This is what makes this sort of knowledge "shared knowledge". The fact that it can be communicated between individuals across space and over time is important. A significant proportion of current knowledge is not new but has been passed down to us from the past or from other parts of the world.
3. Methodology

Knowledge framework

Scope/applications

Concepts/language

- What are the methods or procedures used in this area and what is it about these methods that generates knowledge?
- What are the assumptions underlying these methods?
- What counts as a fact in this area of knowledge?
- What role do models play in this area of knowledge?
- What ethical thinking constrains the methods used to gain knowledge?

Methodology

Historical development

Links to personal knowledge

Figure 8

One of the most striking differences between the AOKs is the methods that they use. Examining and comparing the methodologies of the different AOKs begins with students being able to identify the specific methods or procedures used in an AOK, and exploring the assumptions that underlie those methods.

Assumptions and values play an important part in the methodology that underpins the production of knowledge. Each AOK establishes certain things as being important and others less so—each has a set of values that underpin the knowledge that is produced. No AOK is value free—some methods are better than others, some facts are more reliable than others, some theoretical models give better understanding than others. Recognition of these values and how they affect the methodology that is used is crucial to understanding the character of the AOK.

For example, in the natural sciences, much knowledge comes about through testing hypotheses by experiment; this assumes that laboratory conditions accurately mimic what happens in the rest of the universe and that the world can be understood as a system of causes determining effects.

One way to explore methodology is to examine the question of what counts as a fact in this particular AOK. Another way would be to examine the question of what counts as an explanation in this particular AOK. For example:

- in history, an explanation might consist of an overarching theory giving plausible motivations to the various historical actors that joins up the isolated historical documents
- in literature, the explanation of text might involve examination of its themes, motives and characterization through the literary devices employed.

Another way to explore methodology is to examine any constraints on the methods that can be used; for example, ethical constraints on experiments conducted in the human sciences.
4. Historical development

Knowledge framework

Scope/applications →
Concepts/language →
Methodology →
Historical development
- What is the significance of the key points in the historical development of this area of knowledge?
- How has the history of this area led to its current form?
Links to personal knowledge →

Figure 9

AOKs are dynamic entities that change over time as conceptual developments and advances are made in methodology. This need not be seen as a problem but rather an advantage—our systems are flexible and capable of responding to developments. Knowledge can, therefore, be considered provisional.

For example:

- consider a Swedish school textbook in history from 1912: it is quite different in its idea of history from those used today; a physics textbook from 1912 seems to have much the same idea about physics but the content is likely to be different
- an artwork might derive much of its meaning from the historical context in which it is produced and might even reference other earlier works.

Tracking the rough historical development of an AOK is a valuable tool in TOK. It is tempting to speculate that if we re-ran the history of human knowledge then the AOKs might look quite different to their current form. How much of our knowledge depends on accidents of history? Are certain AOKs more susceptible to these historical factors than others? Even our systems of measurement (m, kg, s) are historically situated and so, of course, are the concepts and the language employed by subject disciplines. Interesting discussions can be had over why particular historical events and factors have had such an impact on the development of a particular AOK.
5. Links to personal knowledge

<table>
<thead>
<tr>
<th>Knowledge framework</th>
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<tr>
<td>Scope/applications</td>
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<td>Methodology</td>
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<td>Historical development</td>
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<tr>
<td>Links to personal knowledge</td>
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</table>

- Why is this area significant to the individual?
- What is the nature of the contribution of individuals to this area?
- What responsibilities rest upon the individual knower by virtue of his or her knowledge in this area?
- What are the implications of this area of knowledge for one's own individual perspective?
- What assumptions underlie the individual's own approach to this knowledge?

There are links and interactions between shared and personal knowledge. Individuals contribute to shared knowledge. Their contributions have to go through whatever validation procedures are required by a particular discipline in order to be counted as "common" knowledge in that area. But shared knowledge also contributes to an individual's own understanding of the world. This is one, but not the only, purpose of shared knowledge—that it enables individuals to make sense of the world. The nature of this interaction between shared and personal knowledge is the last component of the knowledge framework to be examined. It is important because it addresses the question "so what does this mean for me?" What impact do these AOKs have on our individual lives and the way in which we view the world? How does this area form or change our perspective?

Specific areas of knowledge

On the following pages there is a brief introduction to each AOK. There are also diagrams providing examples of how each AOK could be approached, including suggested topics for study and knowledge questions. It should be noted that these are suggestions only, and can be used or substituted for others according to the specific interests and needs of the TOK teacher and students. These diagrams are tools which teachers should use with good judgment, being careful not to use them in such a way that the course becomes formulaic.
Mathematics

Is there a distinction between truth and certainty in mathematics? Is mathematics independent of culture? Is mathematics discovered or invented?

Mathematics is founded on a set of more or less universally accepted definitions and basic assumptions. It proceeds from a system of axioms using deductive reasoning to prove theorems or mathematical truths. These have a degree of certainty unmatched by any other area of knowledge, making it excellent raw material for study in TOK.

Despite, or rather because of, the strict confines of mathematical logic, mathematics is an enormously creative subject, asking of its practitioners great leaps of the imagination. Pure mathematics requires no prior sense perception at the start of inquiry but the application of mathematics to real-world situations requires techniques such as those used in the natural and human sciences. Indeed, most research in the natural and human sciences is underpinned by mathematics. There are also often close links between mathematics and the arts where formal requirements for harmony or symmetry impose mathematical structures on a work.

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<tr>
<th>Knowledge framework</th>
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<tr>
<td><strong>Scope/applications</strong></td>
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<tr>
<td>- mathematics concerned with quantity, shape, space and change—difficult to define</td>
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<tr>
<td>- used to create models in the natural and human sciences</td>
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<tr>
<td>- the possibility of a mathematical treatment is taken by many to be the sign of intellectual rigour—for example, in economics or psycholology</td>
</tr>
<tr>
<td>- possesses qualities such as beauty and elegance—sometimes thought of as an art form</td>
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<tr>
<td>- seems to be broadly universal and not tied to a particular culture</td>
</tr>
<tr>
<td>- mathematical truths seem to be certain and timeless</td>
</tr>
<tr>
<td><strong>Concepts/language</strong></td>
</tr>
<tr>
<td>- uses a precisely defined set of symbols standing for abstract things like sets and relations</td>
</tr>
<tr>
<td>- key terms such as axiom, deduction rule, conjecture, theorem, proof</td>
</tr>
<tr>
<td><strong>Methodology</strong></td>
</tr>
<tr>
<td>- uses pure reason from axioms to produce proofs of mathematical theorems</td>
</tr>
<tr>
<td>- a statement in mathematics is true if and only if it is proved</td>
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<tr>
<td>- mathematics does not seem to rely on sense perception of the world</td>
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<tr>
<td>- mathematicians require Intuition and imagination in order to prove theorems</td>
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<tr>
<td><strong>Historical development</strong></td>
</tr>
<tr>
<td>- seminal developments such as negative or Irrational numbers have led to big changes in the way we view the world</td>
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<tr>
<td>- numbers and geometry particularly important in historical development of other fields such as painting, architecture and music</td>
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<tr>
<td><strong>Links to personal knowledge</strong></td>
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<tr>
<td>- maths ability often taken to be a proxy for intelligence with consequences for individual self-esteem</td>
</tr>
<tr>
<td>- much scope for major contributions to mathematics by talented individuals who cannot always explain the source of their insights, often ascribing them to intuition, imagination or emotion</td>
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Knowledge questions

Why is there sometimes an uneasy fit between mathematical descriptions and the world? (For example, if I had four cows and then took five away, how many would be left?)

Is mathematics invented or discovered?

If mathematics is an abstract intellectual game (like chess) then why is it so good at describing the world?

If mathematics is created by man, why do we sometimes feel that mathematical truths are objective facts about the world rather than something constructed by human beings?

If mathematics is "out there" in the world then where exactly can it be found?

Why should elegance or beauty be relevant to mathematical value?

Examples of possible topics of study

Simple mathematical proofs

Beauty and elegance in mathematics

Axioms and the rejection of the axiomatic approach

Mathematics in nature

Figure 11
Natural sciences

What does it mean for a discipline to be a science? Is there just one scientific method? Should there be ethical constraints on the pursuit of scientific knowledge?

The natural sciences seek to discover laws of nature—regularities in the natural world. These are often causal relationships of the form "if X happens then Y will be the result". This description implies that there is an attempt to produce a system of knowledge that is independent of human agency. Whether this is indeed possible is a matter of debate.

The methods of the natural sciences based on observation of the world as a means of testing hypotheses about it are designed to reduce the effects of human desires, expectations and preferences, in other words they are considered objective. In this sense, the natural sciences emphasize the role of empirical inquiry: scientific knowledge must be able to withstand the test of experience and experiment.

One interesting area of discussion is what differentiates the scientific from the non-scientific. Many would suggest that it is the methods used in science. It is therefore interesting to consider what it is about these methods that mean that the knowledge they generate is often regarded as more reliable than those employed by other AOKs.

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### Knowledge framework

- **Scope/applications**
  - natural science is a system of knowledge of the natural world largely based on observation and constructed using reason and imagination
  - the sciences are shared knowledge, often shared by a large grouping geographically spread and largely independent of culture
  - prediction is often an important feature of scientific knowledge, but understanding is also a prime purpose
  - natural sciences are interested in producing generalized statements, principles or scientific laws about the natural world
  - most of these laws are causal: if event A happens then B will happen as a result

- **Concepts/language**
  - many of the laws of the natural sciences are stated using the language of mathematics—maths is central
  - language of the sciences is precise in order to eliminate ambiguity which might affect the reasoning process

- **Methodology**
  - measurement involves interaction with the world, but this interaction can sometimes change the aspect of the world we are trying to measure
  - models are important in most areas of the natural sciences
  - classification is a central idea in many of the natural sciences
  - among the methods employed by the natural sciences are: hypothesis-deduction and induction—use of reason and sense perception

- **Historical development**
  - there have been a number of pivotal shifts of thinking in the development of the natural sciences

- **Links to personal knowledge**
  - the natural sciences give us a view of ourselves as material entities behaving according to universal laws
  - there is little space here to see ourselves as rational, free agents with desires and the ability to choose
  - individuals have contributed to scientific progress, often in revolutionary ways
  - use of imagination, intuition and emotion in creation of hypotheses
Human sciences

To what extent are the human sciences reliable? Can human behaviour be subject to laws in the same way as the material world? What constitutes good evidence in the human sciences?

In TOK, the term "human sciences" includes many of the subjects in group 3 (individuals and societies) in the Diploma Programme. In simple terms, the human sciences study the reality of being human. More specifically, the human sciences study the social, cultural and biological aspects of human existence. If we add the study of human behaviour to this definition then the Diploma Programme offerings cover a range of human sciences including psychology, social and cultural anthropology, economics and geography.

A fundamental difference between human sciences and natural sciences is in the interpretation of the word "science". The human sciences might be classified as science because they use the scientific method to test the validity and reliability of hypotheses. However, unlike the natural sciences, the phenomena they try to explain might not possess hard and fast laws that admit no exceptions. They might therefore resort to statistical methods to establish their findings, producing knowledge that is less reliable in terms of issuing predictions.
Knowledge framework

Scope/applications
- investigate and understand human behaviour
- includes a diverse range of disciplines: anthropology, economics, psychology, sociology
- some disciplines aim broadly to predict human behaviour (economics, applied sociology)

Concepts/language
- key concepts such as opportunity cost in economics
- use of mathematical language to suggest intellectual rigour
- problems with wording of questionnaires and the difficulty of neutral language

Methodology
- experimental method
- use of questionnaires, polls
- direct observation of human behaviour
- use of models
- use of reason to construct plausible theory consistent with other accepted knowledge in the field
- some assumptions of human rationality (economics), or law-like behaviour (psychology)
- use of statistical methods—on what basis to choose things like significance levels of tests?

Historical development
- early views of economics as study of man as a maximizer of utility have been replaced by modern behavioural economics which sees man as essentially irrational and heuristic
- early ideas of anthropology as a study in human progress have been replaced post-Boas with less value-laden perspectives
- Freudian psychodynamics have been replaced by a drive towards empirical observation of behaviour in modern functional theories in psychology

Links to personal knowledge
- understanding of self as a locus of consciousness, as an economic agent or as an individual defined relative to a social background
- significant contributions made by individuals in all fields: Smith, Ricardo, Keynes, Friedmann in economics, Boas in anthropology, Freud, Watson in psychology
- modern economics and psychology are more collaborative, although anthropology seems to be more open to individual contributions
- to what extent is it legitimate for the inquirer to draw upon his/her own experiences as evidence in his/her investigations in the human sciences (the verstehen approach)?
- to what extent are personal factors such as gender and age important in the human sciences?
Knowledge questions

- Human sciences are less able to predict because humans have free will. But human sciences nevertheless try to establish laws of human behaviour. How can this be?
- To what extent are the methods of the human sciences 'scientific'?
- There are exceptions to laws in the human sciences. To what extent then are these actually laws?
- How can one eliminate the effect of the observer being part of the system in the human sciences (see the Hawthorne effect in psychology or the field worker being part of the community in anthropology)?
- In the verstehen approach, how might the emotions of the investigator as object of study affect the result of the investigation?
- How can one rely on the results from questionnaires given the problems of wording, leading questions, sampling and selection effects and the fact that respondents might not either know the truth about their own intentions or indeed tell it?
- How can we judge whether one model is better than another?

Examples of possible topics of study

- The relationship between the human sciences and the natural sciences
- Observation and the effect of the observer
- Polls, questionnaires and leading questions
- Predictions, trends and laws

Figure 13
**History**

*What is unique about the methodology of history? Is eyewitness testimony a reliable source of evidence? How do we decide which events are historically significant?*

History is an area of knowledge that studies the recorded past. It raises knowledge questions such as whether it is possible to talk meaningfully about a historical fact and what such a fact might be, or how far we can speak with certainty about anything in the past. Studying history also deepens our understanding of human behaviour, as reflecting on the past can help us to make sense of the present.

Documentary evidence plays an important role in history, which raises questions about the basis for judgments of reliability of that evidence. The individual historian also plays an important role in history and in the 20th century there was much debate over whether historical facts exist independently of historians. Some argue that there is always a subjective element in historical writing because historians are influenced by the historical and social environment in which they are writing and this unavoidably affects their selection and interpretation of evidence.

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<tr>
<td>- the study of the recorded past</td>
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<td>- helps make sense of the present</td>
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<td>- knowledge shared by group to help produce a sense of common heritage</td>
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<td>- perhaps allows us in a limited way to envisage possible futures</td>
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<td><strong>Concepts/language</strong></td>
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<tr>
<td>- narrative style appropriate for the purpose of understanding the past</td>
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<td>- designed for understanding possibly at an emotional level rather than strict objective disinterest</td>
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<tr>
<td><strong>Methodology</strong></td>
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<td>- use of contemporary documents as fixed points of historical theory</td>
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<tr>
<td>- historical theory being constructed out of the available evidence by reason and imagination</td>
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<td>- issues of selection and interpretation of source material</td>
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<tr>
<td>- issues of reliability of first-hand accounts—memory and observation are affected by interests and expectation</td>
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<tr>
<td>- history seems to presuppose a theory of human action. For example, the view of history as being shaped by the actions of individuals as opposed to the idea of history as the playing out of class struggles or of a zeitgeist</td>
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<tr>
<td>- an explanation in history is a plausible theory that explains the relevant source material and fits other accepted theories</td>
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<tr>
<td><strong>Historical development</strong></td>
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<tr>
<td>- present preoccupations tend to affect the study of past events</td>
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<tr>
<td>- history itself looked different in the past</td>
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<td><strong>Links to personal knowledge</strong></td>
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<tr>
<td>- understanding one's history gives a clear sense of personal identity</td>
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<tr>
<td>- history tends to be constructed through the interaction of individual historians—there is less emphasis on collaborative work than in the natural sciences</td>
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Figure 1A

Examples of possible topics of study

- Progress and patterns in history
- Sciences and the human between history
- Relationships
- Objectivity in history

Knowledge

- What distinguishes a better historical account from a worse one?
- How can historical accounts be assessed?
- What is a fact in history?
- The history written
- What is the relation between the style of language used and particular cultural or national perspective?
- How can one gauge the extent to which a history is told from a perspective?
- How does a historian assess the reliability of sources?
- Is it possible for historical writing to be free from perspective?
The arts

How can the subjective viewpoint of an individual contribute to knowledge in the arts? On what basis can the merit of a work of art be judged? Is there any point in discussing the arts—should we not simply experience them?

“The arts” is a collective term that encompasses the creative productions of humans and encompasses the visual arts, the performing arts and the literary arts. The arts explore the experience and reality of being human and are an essential element of culture.

The arts could be thought of as creating a bridge between personal knowledge and shared knowledge. Many of them are collaborative. They use emotion as a currency to generate significance at a personal level but reason provides a restrictive framework necessary for the creation of meaning: artworks have their own inner logic. Some regard the arts as having an extra-artistic cognitive function, that they have a message about man’s place in the world which might have social or political implications. For example, there might be a case for supposing that the arts have an important function as a medium for social criticism and transformation. In any case, there is a widespread belief that the arts have a higher purpose to educate by encouraging introspection and sometimes making us think about how we should live our lives.
Areas of knowledge

Knowledge questions

- Are the arts a system of knowledge?
- If artworks are products of the imagination of the artist, how is it that they constitute a system of knowledge?
- What is the relationship between the artist and the artwork?
- Is the aesthetic value of an artwork purely a subjective matter?
- What is the importance of form in artwork?
- Does art enlarge what is possible to think?
- Is it possible that aesthetic value is at its base something universal—a fact about human beings?

Examples of possible topics of study

- Art as a vehicle for social critique
- Artwork used to affect the beliefs of individuals and groups (for example, advertising, film, literature, folksongs)
- Art forms that are strongly rooted in a particular culture or tradition
- Art and morality (for example, Riefenstahl, Kirkup)

Figure 15
**Ethics**

Is there such a thing as moral knowledge? Does the rightness or wrongness of an action depend on the situation? Are all moral opinions equally valid? Is there such a thing as a moral fact?

One thing often said to distinguish humans from other animals is morality. A key question in ethical discussions in TOK is therefore whether we can really know whether something is moral. What is peculiar about moral values is that they seem to embody obligations for action.

An example of a key area of discussion in ethics is the issue of moral rules. There is disagreement about whether being moral is about following rules, not least because some would question whether moral rules really exist at all. There is also debate about whether moral rules should ever be broken, and if so, in what circumstances. Other key areas of discussion include the issue of whether humans are essentially altruistic or selfish, or whether the consequences of, or motivation for, an action is the location of moral value.

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<td>Scope/applications</td>
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<tr>
<td>• morality is often regarded as concerned with praiseworthy or blameworthy reasons for action</td>
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<td>• ethics more generally concerned with answering the question &quot;what should one do?&quot;</td>
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<td>• moral values seem to be distinct from other sorts of value in that they produce obligations to action</td>
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<td>• an ethical viewpoint seems to imply that the individual takes the interests of others into consideration as well as his or her own</td>
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<tr>
<td>Concepts/language</td>
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<tr>
<td>• categories: acts that are prohibited, permitted or required</td>
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<tr>
<td>• &quot;what should one do?&quot; might be a different question than &quot;what is one morally obliged to do?&quot;</td>
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<tr>
<td>• general requirement for ethical judgments to be universalizable—so they have a public dimension almost by definition</td>
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<td>• rights seem to be goods that the group is obliged to provide for the individual—so each right claimed carries a corresponding obligation</td>
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<tr>
<td>• moral language contains a built-in requirement for action</td>
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<tr>
<td>Methodology</td>
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<tr>
<td>• taking an ethical framework as a starting point and reasoning from general principles to a specific situation</td>
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<tr>
<td>• extracting morally significant aspects using reason from the perception of the current situation</td>
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<tr>
<td>• ethical principles can be refined by checking them against our moral intuitions</td>
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<tr>
<td>• our moral intuitions can be refined by checking them against ethical principles</td>
</tr>
<tr>
<td>• consequentialist ethics requires imagining consequences of an action and evaluating them</td>
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<tr>
<td>Historical development</td>
</tr>
<tr>
<td>• the nature of ethical thought might have changed somewhat from that held by Greek thinkers of the fourth century BCE</td>
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<tr>
<td>• perhaps the emphasis now is less on virtues and more on rights</td>
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<tr>
<td>Links to personal knowledge</td>
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<tr>
<td>• moral obligations require action, so morality impacts on the individual</td>
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<tr>
<td>• why should living a moral life matter?</td>
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<tr>
<td>• is living a moral life a question of having the right character?</td>
</tr>
<tr>
<td>• one might be guided by emotion and intuition, but moral judgments seem to be more than simple expressions of personal preference</td>
</tr>
</tbody>
</table>
In what sense can ethics be regarded as a system of knowledge?
How are conflicts between different ethical systems resolved?
To what extent might lack of knowledge be an excuse for unethical conduct?
To what extent might possession of knowledge carry with it moral obligations?
Do people act against their own interests?
Do moral truths exist?
Why be moral?

Examples of possible topics of study

- Emotion and reason in ethics
- Ethical dilemmas
- Ethical theories (for example, utilitarianism, virtue ethics, Kantian ethics)
- Ethical language
Religious knowledge systems

Religious knowledge systems offer answers to fundamental questions about the meaning and purpose of human life. This area of knowledge incorporates a diverse range of different beliefs and systems; for example, varieties of theism, pantheism and polytheism. Some people believe that there is one true religion whereas others, known as religious pluralists, argue that the different religions are just different reflections of the same underlying truth. Religious knowledge has both a shared and personal dimension and offers a concrete context, within the TOK classroom, to explore the links between the two.

Religion is often regarded as a sensitive area in which discussions should be had with caution, in part because people have very personal and deeply held convictions regarding religious matters. However, for many people their religion has a major impact on how they understand the world, permeating their thinking and influencing their understanding of other AOKs, for example, the idea that ethics and religion are inextricably linked. In any case, for many, religion provides a backdrop to all the other knowledge they have.

Knowledge framework

- attempts to explain the meaning and purpose of life
- incorporates a diverse range of systems from polytheism to pantheism
- difficulties in using human language to describe the divine
- importance of analogy and metaphor
- language shifts: oral to written, Latin to vernacular
- conventions: authority of scripture in many systems, leaders and authority figures
- key concepts: faith, miracles, god(s), revelation
- argumentation, use of reason
- interpretation
- use of revelation
- sense perception
- authority
- value on faith
- debates between literal/fundamentalist, conservative and liberal approaches
- impact of scientific knowledge
- language developments leading to wider developments
- understanding of the self—personal views on life after death, personal moral decision-making
- emotional element in religious belief
- attitudes and behaviour towards others
- founding figures: Muhammed
- spiritual leaders: Dalai Lama
- individuals who have changed the course of religious history such as Martin Luther
- role of collaboration—community element: ummah in Islam, evangelism and religious pluralism
Knowledge questions

- What is the difference between religious feelings, religious beliefs and religious faith?
- Is it possible to know God?
- Are religious beliefs reasonable?
- Is faith irrational?
- Where do religious beliefs come from?
- Can you think of any evidence which would convince you that God does not exist?
- What is the value of thinking about questions to which there are no definite answers?
- How do we decide between the competing claims of different religious knowledge systems?

Examples of possible topics of study

- Arguments for and against the existence of God
- Religious language
- Religious experience and miracles
- Religious pluralism

Figure 17
Indigenous knowledge systems

Indigenous knowledge systems explore local knowledge unique to a particular culture or society. The term usually refers to the knowledge constructed by a particular group of people such as the Namaqua people of Southern Africa, the Secoya people of Ecuador and Peru, the Ryukyuan people of Japan and the Wopkaimin people of Papua New Guinea. An important feature of indigenous knowledge systems is that they are not static. They are dynamic as a result of both internal and external influences. The Maori knowledge system today, for example, is a mixture of traditional knowledge and knowledge inherited over time from exposure to European culture.

TOK students can explore this AOK from a general, broad point of view to raise awareness of the diversity of indigenous knowledge systems or they could study a particular indigenous knowledge system. When studying indigenous knowledge systems, it is important to examine the methods of communication, decision-making processes, thinking processes and the holistic view of knowledge.
Knowledge questions

- How reliable are "oral traditions" in preserving cultural heritage in indigenous knowledge systems?
- To what extent does the fact that early literature on indigenous knowledge systems was written from a non-indigenous perspective affect its credibility?
- How does sense perception play a fundamental role in the acquisition of knowledge in indigenous knowledge systems?
- What elements of universal significance may we discern in indigenous knowledge systems?
- To what extent can disinformation by education and governance threaten indigenous knowledge systems?
- Why is there often such a strong connection between indigenous knowledge and cosmology?
- What are the roles of folklore, rituals and songs in indigenous knowledge systems?

Examples of possible topics of study

- The nature and role of artifacts
- Cycles and changes in the earth and sky
- Plants and animal behaviour
- The impact of technology on the relationship between indigenous peoples and their environment

Figure 18