

AS/A level Thinking Skills
Unit 2: Critical Thinking – Further skills

Recommended prior knowledge

Students need to have an understanding and proficiency in the analytic techniques of either O level English or IGCSE English.

Context

The unit focuses on the skills required in evaluating an argument. These generic skills require a good working knowledge of the analytic skills of Unit 1. The evaluation skills are extended in Unit 5. They are useful but not vital in developing the skills of constructing an argument (dealt with in Unit 4 and 8). They are independent of the problem-solving skills studied in Units 3, 6 and 7. This unit prepares students for the Critical Thinking questions in Paper 2 (in particular question 3) of the AS exam.

Outline

The unit begins with a formalisation of the work on implicit assumptions. The conception of a rigid argument (ie with appropriate implicit assumptions filled in) informs the work on flaws (which are little more than assumptions, which famously seem convincing but are not upon inspection), and further evidence (does it conflict with or support any of the assumptions?). The work on key terms and expressions can be done at any stage in the course, and should sensitise the student to the dangers (and powers) of ambiguous expressions. The ability to recognise plausible explanations is useful in assessing the evidence used in an argument: the student needs to be aware of the multitude of explanations for any evidence, and develop a sophisticated sense of which are most plausible.

Topic	Learning Outcomes	Suggested teaching activities	On-Line resources
1	<p>Recognising implicit assumptions</p>	<ul style="list-style-type: none"> • A formal debate is a good way of unifying all the skills introduced so far – a productive structure is to allow for a period after the teams have made their initial cases (proposed and seconded), in which the class summarises the main reasons which have been offered and attempts to identify implicit assumptions. The weaknesses in these are then a good basis for discussion when the debate is opened to “the public”. <ul style="list-style-type: none"> - alternatively: two teams are given a point of view to defend (not necessarily opposing, could be the same or quite separate). They are to present their argument to the other side in writing (with a word limit, e.g. 100 words). <i>At this point</i> they are told that the competition is to see how many assumptions they can spot in the other team’s argument – points are awarded according to the accuracy with which they identify and explain the assumption, through indicating reasons why the assumption may not be (entirely) true (this leads naturally into flaws (see below)) • NB it is a good idea to keep a record of topics that have been covered in detail over the year, so that students cover all the obvious areas where arguments are taken from such as issues to do with the environment, economics, individual versus the state – students find it easier to assess and respond to arguments when they have thought about that topic before in some detail; also these areas are usually relevant areas for further argumentation when this is required – students can 	<p>Butterworth and Thwaites – Chapters 3 &9</p> <p>Sketch from “Monty Python’s – the search for the Holy Grail” in which it is argued that a woman is a witch – students fill in the implicit assumptions : www.youtube.com/watch?v=yp_l5ntikaU</p> <p>Test on recognising implicit assumptions at http://philosophy.hku.hk/think/arg/hidden.php</p> <p>For debate ideas try www.idebate.org</p> <p>Also Truthmapping.com – unusual issue debating site (students may like to have a look at it) – www.truthmapping.com/index.php</p>

		be selected to organise a file of newspaper cuttings for the class	
2	Recognising flaws in reasoning	<ul style="list-style-type: none"> • The easiest example of an implicit assumption which is a classic flaw is that of a “slippery slope” argument – “things will carry on getting worse/changing at the same rate/in the same way”. • A list of examples of flaws to be aware of can be issued to students as an advanced assumptions exercise. The general cases can then be formalised. • Formal debates in which students disguise flaws to be spotted. 	<p>Butterworth and Thwaites – Chapter 11&21</p> <p>A huge list of flaws at www.fallacyfiles.org</p> <p>A multiple choice test on flaws at www.sjsu.edu/depts/itl/graphics/main.html and click on “exit quiz for fallacies”, or “40 fallacy review exercises”</p> <p>Multiple choice test at http://philosophy.hku.hk/think click on “exercises on fallacies”.</p> <p>www.idebate.org has lots of ideas on debates and debating exercises</p>
3	Assessing the impact of further evidence	<ul style="list-style-type: none"> • When the implicit assumptions in an argument have been made clear, the impact of further evidence can be considered. It may either support or undermine the explicit /implicit reasoning, or simply support the conclusion independently. 	<p>Butterworth and Thwaites – Chapter 12&13</p>

Topic	Learning Outcomes	Suggested teaching activities	Learning Resources
4	Understanding and clarifying the key terms and expressions	<ul style="list-style-type: none"> • ‘Starter’ task – students should try to think of words with as many different meanings as possible. (Can see if students know any jokes or amusing tales where which hinge on an ambiguity – the chapter in ‘Charlie and the Chocolate Factory’ by Roald Dahl about the ‘<i>Square sweets that look round</i>’ does this nicely). Two words which have famously many meanings : <i>mole</i> and <i>set</i>. • Progress on to words with vague meanings (distinction between vagueness & ambiguity) – particularly abstract words such as “justice”, “democracy”, “freedom”. • Students can be asked to highlight ambiguities in passages/ arguments + discuss how different readings affect the meaning. 	www.sjsu.edu/depts/itl and click on “main menu” and then “vagueness and ambiguity”
5	Selecting plausible explanations	<ul style="list-style-type: none"> • The (similarities and) differences between explanations and arguments needs to be discussed. Students could consider a list of statements, and decide which ones might require explanation and which might require an argument. They should then create and discuss plausible explanations. • Another way to quickly check learning is to give students a series of similar facts or phenomena and a list of explanations and get them to match the relevant explanations to the phenomena. Some redundant explanations are useful. 	Butterworth and Thwaites – Chapter 14 and 23 Multiple choice test at http://www.sjsu.edu/depts/itl/graphics/induc/causal-q.html