

- Informal logic is introduced by identifying and analyzing an argument within a short passage. From this analysis, the fallacies of *hasty generalization* and *problematical premise* are used to illustrate two types of flaws in argumentation. (SE pp. 44-46)
- A toolkit of 14 fallacies is introduced. These fallacies can be used to judge arguments as cogent (strong) or not cogent (weak). (SE pp. 47-59)
- Informal logic fallacies cannot be used uncritically. (SE p. 60)
- Six more fallacies are introduced in the context of a humorous story, "Love is a Fallacy" by Max Shulman. (SE pp. 60-63)

**Learning Goal**

Students will be introduced to informal logic and understand how this kind of logic is used to assess arguments for cogency.

## Chapter 2: Informal Logic

### Background

In political debates, editorials, letters to the editors of newspapers, scholarly discussions, or conversations with friends, people are often trying to convince others that their beliefs are correct by presenting *reasons* in support of their beliefs. Reasoning involves presenting arguments that are judged by the arguer as strong—that is, as giving compelling support for an idea or belief. However, not all arguments are strong. Often, when we analyze an argument, we find it has flaws. This, of course, undermines the very idea or belief it is trying to support or justify.

Informal logic is a branch of logic that involves analyzing arguments that arise in a variety of everyday contexts, such as those listed above, to determine if the reasons given in support of a person’s beliefs are truly compelling. As such, a study of informal logic fosters critical thinking, including the ability to assess, analyze, and identify arguments.

### About Chapter 2

By focussing on the nature and structure of arguments, Chapter 2 continues the theme of *reasoning about reasoning* from Chapter 1. By introducing a branch of logic known as informal logic, Chapter 2 encourages students to be mindful of, and on guard against, various types of faulty reasoning that occur in everyday contexts (e.g., conversations with friends, political leaders’ debates, etc.). Because being aware of fallacies in everyday argumentation will enhance students’ ability to think critically, this chapter is key to the study of reasoning.

### Features

Not applicable.

### Teaching Plan 1 (SE pp. 42-65)

#### Activity Description

Working independently and in groups, students will work through the exercises in Chapter 2.

#### Assessment Opportunities for Chapter Questions

The table below summarizes assessment opportunities for selected chapter questions, including questions in the Chapter Review, which are relevant to this teaching plan.

Assessment Type	Assessment Tool	Feature Questions	Section Questions	Chapter Review Questions
Assessment as Learning	Text answers		1 and 2, SE p. 47 1 and 2, SE p. 63	
Assessment for Learning	Text answers		a)-e), SE p. 51 a)-e), SE p. 56 a)-d), SE p. 59	
Assessment as Learning	Text answers			5, SE p. 65

## Resources Needed

None.

## Timing

150 minutes  
(two 75-minute classes)

## Possible Assessment of Learning Task

Students develop and perform a skit illustrating at least five of the fallacies discussed, based on Chapter Review question 5 (SE p. 65). Assess whether students have applied and illustrated their chosen fallacies appropriately.

## Learning Skills Focus

- Independent work
- Collaboration

## Assessment (For/As Learning)

As teachers move through each chapter, opportunities will be highlighted to provide assessment for/as learning in preparation for assessment of learning at the end of each chapter.

Task/Project	Achievement Chart Category	Type of Assessment	Assessment Tool	Peer/Self/Teacher Assessment	Learning Skill	Student Textbook Page(s)	Blackline Master
Section questions	Knowledge; Thinking; Communication; Application	For or Of	Text answers	Self; peer	Independent work; collaboration	47, 51, 56, 59	
"Love is a Fallacy" reading	Knowledge; Thinking; Communication	For or Of	Text answers	Self; peer	Independent work; collaboration	60-63	

## Prior Learning Needed

No prior learning is required.

## Teaching/Learning Strategies

1. Have students read through Chapter 2. As they go, have them respond to the questions on SE pp. 47, 51, 56, and 59 in groups or pairs.

Point out that on SE p. 53, the text notes that "circular arguments are often referred to as *Hume's inductive problem with induction*, referring to the philosopher David Hume (1711–1776), who pointed out that an inductive argument cannot be justified by an appeal to induction." Clarify for students that the example of a circular argument given, which involves induction, is inspired by Hume.

2. Students should then read "Love is a Fallacy" (SE pp. 60–63) and answer, in groups or pairs, the section questions on SE p. 63. Note: Regarding section question 1 on SE p. 63, there are actually six fallacies in the story, not four as the question states.
3. Have students complete Chapter Review question 5 on SE p. 65 in pairs. This can be done in the form of a skit to be presented next class as an assessment of learning task. The skit can be modelled on the "Love is a Fallacy" feature. Students should be given time to write, edit and rehearse their skits. Depending on the number of students in a class, the presentation and discussion of the skits may take up an entire class.

**DI** Students eager to learn about more fallacies should be encouraged to research the topic using the Internet and the search word *fallacies*. There are numerous sites that list many more fallacies than are listed in Chapter 2. Students could describe newly discovered fallacies to the class.

## Text Answers

### Page 47: Section questions

1. a) Here is a possible reconstruction of the argument using three sub-arguments and where *HP* stands for *hidden premise*. A hidden premise is an unstated premise that is needed to make the argument stand.

P: No penalty can frighten a man who is not afraid of death.

HP: A suicidal man is not afraid of death.

C1: No penalty can frighten a suicidal man.

HP: To be effective, laws require penalties that frighten people.

P: No penalty can frighten a suicidal man. (This is from C1.)

C2: Laws against suicidal men are ineffective.

P: Laws against suicidal men are ineffective. (This is from C2.)

HP: Ineffective laws are ridiculous.

C3: Laws against suicidal men are ridiculous.

- b) P: A social problem is a gap between people's (society's) expectations of social conditions (e.g., how much money people have, how much racial discrimination there is) and present social realities.

C1: To reduce a social problem, one can either change people's expectations or change social realities.

P: To reduce a social problem, one can either change people's expectations or change social realities. (This is from C.)

C2: If politicians cannot change social realities then they must change people's expectations.

2. The premise "It is a matter of an eye for an eye" is in support of the conclusion "Take a life, then lose your own." Have students discuss whether this premise is problematical.

### Page 51: Section questions

- a) Appeal to tradition.
- b) Attack on the motive.
- c) Bandwagon argument.
- d) Attack on the person.
- e) Straw man (there is no indication that the poultry workers were demanding air-conditioning, just better ventilation).

### Page 56: Section questions

- a) Appeal to ignorance.
- b) Loaded term.
- c) Begging the question.
- d) Equivocation.
- e) Slippery slope.

## Page 59: Section questions

- a) Accident.
- b) Composition.
- c) Decomposition.
- d) Hasty generalization.

## Page 63: Section questions

1. [Note: Six fallacies were mentioned in the excerpt, not four as the question suggests.]

**Appeal to pity** (*ad misericordiam*): as suggested by its name, this fallacy involves making one feel sorry for another person in order to make one sympathetic to that person's needs.

**Dicto simpliciter**: an argument based on an unqualified generalization (it oversimplifies a situation).

**Faulty analogy**: comparing two things or events in order to establish a further feature of one of the things or events. This fallacy is explained in greater detail on SE p. 143.

**False causality** (*post hoc ergo propter hoc*): this involves inferring a causal link between two events based on the observation that one event (e.g., rain) has, on several occasions, followed another (e.g., taking Bill on a picnic). This fallacy is explained in greater detail on SE pp. 378-379.

**Hasty generalization**: generalizing from a sub-sample of a population (e.g., two people at the University of Minnesota cannot speak French) to all members of the population (e.g., everyone at the University of Minnesota cannot speak French).

**Poisoning the well**: casting someone, or a group of people, in a negative light in order to discredit anything they say.

2. One discussion point for this open-ended question is to consider the view that arguments can be cogent by degree rather than claiming that they are either cogent or not cogent. In other words, arguments can be judged as strongly or weakly cogent.

## Teaching Plan 2 (SE pp. 42-65)

### Activity Description

Students will complete three exercises that involve matching fallacies to arguments. Each exercise also includes one example of a passage that does not contain an argument, in order to assess students' ability to distinguish an argument from a non-argument.

### Assessment Opportunities for Chapter Questions

The table below summarizes assessment opportunities for selected chapter questions, including questions in the Chapter Review, which are relevant to this teaching plan.

Assessment Type	Assessment Tool	Feature Questions	Section Questions	Chapter Review Questions
Assessment as Learning	Informal Logic Fallacies: Exercises 1 and 2 (BLMs 2.2 and 2.3)			
Assessment of Learning	Informal Logic Fallacies: Exercise 3 (BLM 2.4)			
Assessment as Learning	Text answers			2, 4, and 6, SE pp. 64-65
Assessment for Learning	Text answers			1 and 3, SE p. 64

### Learning Goal

Students will practise identifying each of the fallacies introduced in Teaching Plan 1 in order to consolidate their comprehension of these fallacies and become adept at recognizing them in arguments.

## Timing

225 minutes  
(three 75-minute classes)

## Learning Skills Focus

- Independent work
- Collaboration

## Resources Needed

Make copies of these Blackline Masters:

- BLM 2.1 Informal Logic Fallacy Toolkit: Reference Sheet
- BLM 2.2 Informal Logic Fallacies: Exercise 1
- BLM 2.3 Informal Logic Fallacies: Exercise 2
- BLM 2.4 Informal Logic Fallacies: Exercise 3

## Possible Assessment of Learning Task

BLM 2.4 could be used as a test for Chapter 2. If used as a test, students should be given BLM 2.1 as a reference sheet. Or, all three informal logic exercises could be used in preparation for the final test on the unit. In this case, BLM 2.4 could be used as a practise test.

## Assessment (For/As Learning)

As teachers move through each chapter, opportunities will be highlighted to provide assessment for/as learning in preparation for assessment of learning at the end of each chapter.

Task/Project	Achievement Chart Category	Type of Assessment	Assessment Tool	Peer/Self/Teacher Assessment	Learning Skill	Student Textbook Page(s)	Blackline Master
Discussion about fallacies	Knowledge; Thinking; Communication	For	Text answers	Self	Independent work; collaboration	143, 235, 311, 378-379, 464, 541	
Informal logic exercises	Knowledge; Thinking; Application	For	Text answers	Self; teacher	Independent work		BLMs 2.1-2.4

## Prior Learning Needed

Students need to be familiar with the content of Chapter 2 (see Teaching Plan 1).

## Teaching/Learning Strategies

1. Ask students to read about other fallacies that are introduced in later chapters: *faulty analogy* (Chapter 6, SE p. 143), *two wrongs* (Chapter 9, SE p. 235), *false dichotomy* (Chapter 12, SE p. 311), *false causality* (Chapter 15, SE pp. 378-379), *red herring* (Chapter 18, SE p. 464), and *improper appeal to authority* (Chapter 21, SE p. 541). Although the text discusses these fallacies in the context of each unit topic, they are important enough to be incorporated in the exercises below—they can always be reviewed in the context of the unit topic later. The reason for reviewing these additional fallacies now, rather than waiting until they reach the units in question, is that students would benefit from practising the identification of these fallacies in arguments along with the fallacies introduced throughout Chapter 2. This creates a more complete and more rounded fallacy toolkit. Working in pairs, or small groups, students read the Philosophical Reasoning in Context features about the fallacies and discuss them as a class. Students could either answer and discuss the accompanying questions at this point or wait until they work through the relevant chapter. (Note that answers to the accompanying questions can be found in the relevant chapter in the TR.)
2. Students sometimes find it challenging to understand these fallacies and recognize them in the context of arguments. For example, students often confuse hasty generalization with composition, decomposition with accident, or attacking the motive with attacking the person.

Hand out BLM 2.1, which provides a useful listing of the fallacy types, including those that occur later in the student textbook.

3. Have students complete BLM 2.2 individually. When they have finished, assemble them into groups of four to arrive at a consensus regarding the answers. When all groups have had an opportunity to arrive at a consensus, read out the answers. Conclude with a class discussion to assist students with any remaining difficulties. Do not be surprised if students get most of their answers wrong on the first exercise. By the third exercise there is usually enormous improvement.
4. Have students complete BLM 2.3, following the procedure above.
5. Have students complete BLM 2.4, either as additional practise or as an assessment task.

**DI** Students eager to practise more fallacy identification could look up new arguments on the Internet and compile them into exercises for other students to try. For example, five fallacies from Chapter 2 and/or the additional sections in the student textbook could be assigned to a pair of students who look up each fallacy on the Internet (e.g., using the search phrase *hasty generalization* for examples of this fallacy in arguments). After compiling the arguments that commit the fallacies, students could create an exercise for others to try, in which the task would be for the other students to identify the fallacy that is illustrated in each of the five arguments. The arguments could be presented by printing them out or by reading them to the class.

6. Have students complete the Chapter Review questions. Take up and discuss the questions, enriching students' responses to the questions. This can be done in the form of a Socratic-style lesson.

## Text Answers

### Pages 64-65: Chapter Review

1. a) A hasty generalization involves attributing a characteristic of the *members of a subpopulation* to *all of the members of the population* (e.g., five students in my Philosophy class wear glasses, so all students in my Philosophy class wear glasses). A compositional fallacy involves attributing a characteristic of *all parts of a whole* to *the whole itself* (e.g., all people in my Philosophy class wear glasses, so my Philosophy class wears glasses).  
b) The fallacy of accident involves taking a *general rule* and applying it to an *atypical circumstance* (e.g., never tell a lie even if it is to give false information to a potential murderer regarding the whereabouts of his victim). The fallacy of decomposition involves attributing a characteristic of *a whole* to *each of the parts of the whole* (e.g., the average house value in Canada is approximately \$320 000, so that house over there is worth approximately \$320 000).
2. One discussion point is that the definition seems focussed on written arguments, though people are also exposed to audio-visual media that, through the use of images and music, is able to convey ideas in a persuasive manner. The definition of *critical thinking* might be expanded to include a critical analysis of such media.
3. Arguments in a) and b) are cogent, noting that b) uses an argument by analogy.
4. This activity might be expanded to have students find examples in the media of any of the fallacies introduced in Chapter 2 (for example, letters-to-the-editor sections of newspapers often have examples of fallacies).

5. This is a fun and creative way to have students review and apply the fallacies introduced in Chapter 2. The story “Love is a Fallacy” illustrates the kind of skit students might create.
6. Some considerations in a survey like this include making sure that respondents are working with a similar definition of God, that the sampling is random, and that enough people are surveyed to make a credible generalization.