

TOPIC 1

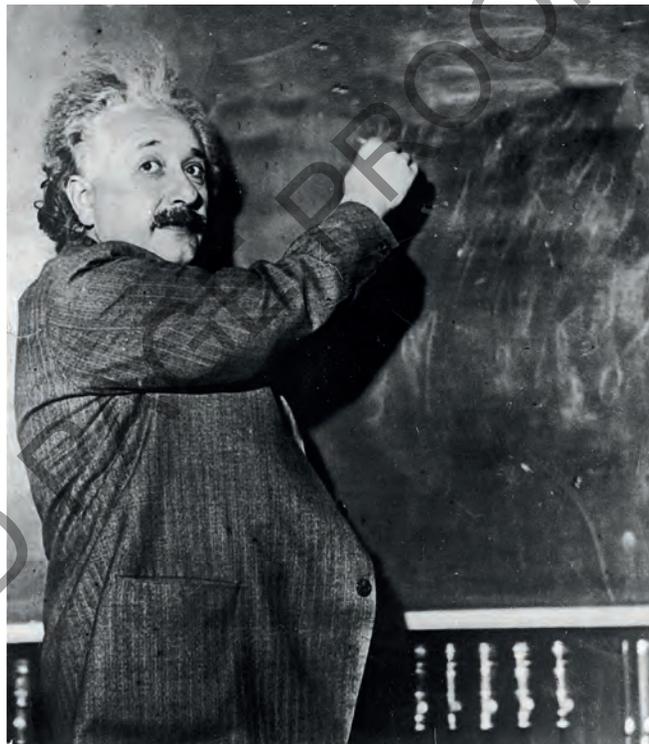
Think quest

1.1 Overview

1.1.1 Why learn this?

Are you ethical? Does it matter? What influences your opinions, values and beliefs? How do your attitudes affect when, how and why you learn? How and why do you think the way that you do? Is it ever worth changing your mind? Why doesn't everyone think the same way as you do? Who are you and who are you yet to become?

Einstein's theories were used to develop nuclear weapons — something he ethically opposed. Should scientists be responsible for how their inventions are used?



1.1.2 Think about these **assessment**

- What are the ABCs of attitude?
- Are you obeying the proximate rules of others?
- What are four key ways of knowing?
- What have Socrates, Karl Popper and Thomas Kuhn got to do with thinking about knowledge?
- What scientific event occurred the year that Einstein was born?
- Is all news about radioactivity bad?
- Can unethical behaviour ever be justified?
- Who owns genetic material?

LEARNING SEQUENCE

- 1.1 Overview
- 1.2 ABCs of attitude
- 1.3 Layers of learning
- 1.4 Change my mind
- 1.5 Einstein's impact
- 1.6 Nuclear news
- 1.7 Decisions, responsibilities and ethics
- 1.8 Thinking tools: See quest
- 1.9 Review

1



Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the concepts covered in this topic.

1.1.3 What makes you, you?

Who are you? What do you need? Why do you react in the ways that you do? Possible answers to questions about the essence of who you are may be related to:

- the chemical instructions in the DNA that you inherited from your parents
- your experiences and the environment in which you live
- a combination of both of these.

Are you a product of only your genes or your environment, or do they both contribute to make you who you are? Scientists have been involved in this ‘nature versus nurture’ debate for many years. Which do you think is the key contributing factor to why you are you?

1.1.4 Bombarded by the media

We are in an age of information. In fact, you are continually being bombarded by it! How can you begin to make sense of all the information you receive? How can you better evaluate it? How can you incorporate this new information into what you already know to develop a better understanding of the world in which you live?

To effectively evaluate articles in the media you need to be able to determine what the facts are, and consider the type of journalism, the quality of writing and the article’s ability to effectively present its message.

What makes good news?

Read the article headlines and opening paragraphs below, and then answer the following questions.

1. For each article, consider the following.
 - (a) What do you think the article is about?
 - (b) What type of article do you think it is? Is it:
 - (i) sensational
 - (ii) informative
 - (iii) entertaining
 - (iv) thought provoking?
 - (c) Use the internet to find further content from each article and find out more about the story by using search parameters such as the article headline and newspaper source.
 - (d) Analyse the language and style of writing used in the article. What kind of audience do you think this article was written for?
 - (e) Do you think you need to be a scientist to understand what the author is writing about?
 - (f) Did the article headline grab your attention and make you want to read more? If not, how could it be improved?
 - (g) Research one of the events or issues mentioned and write your own article about it. Collate the class articles into a journal or newspaper.
2. The first of these articles was written more than ten years ago.
 - (a) What types of environmental and scientific problems did people face at the time?
 - (b) Are they similar or different to those we face today?
 - (c) Use the internet to find out more about the following issues mentioned in the articles:
 - (i) carbon tax
 - (ii) China syndrome
 - (iii) nuclear power
 - (iv) millennium bug.
 - (d) How do you think people’s opinions of the above issues have changed in the past ten years? Justify your answer.

That white-hot ball-bearing in the sky

Our supposedly middle-aged sun has been behaving like an adolescent of late, hurling huge clouds of particles at us after its face broke out in spots.

Sydney Morning Herald

'Bang' when a nuclear reactor fails

There is no such thing as fail-safe nuclear power, science commentator Karl Kruszelnicki said yesterday.

'Nuclear reactors are not fail-safe. They won't fail in a safe way. They can go bang as Chernobyl did,' Dr Kruszelnicki said.

Herald Sun

Nuclear crisis is no longer fiction

The nightmare scenario for Japan's crippled nuclear power plants is the so-called China syndrome.

The Hollywood movie *The China Syndrome* portrayed a near-meltdown of nuclear fuel rods in a US reactor.

Herald Sun

Millennium bug melee misses the true degree of our challenge

Tim Flannery's 1000-year carbon concession is a straw man that will no doubt burn brightly throughout the highly contested carbon tax debate.

The Australian

UNCORRECTED PAGE PROOFS