

## Developing ideas ◀

- 1 Read the short introduction to Benjamin Franklin and share any other information you know about him.



Benjamin Franklin (1706–1790) was one of the Founding Fathers of the United States and helped draft the Declaration of Independence and the US Constitution. Apart from being a successful statesman, he was also well known as a leading American author, printer and publisher, successful diplomat, creative scientist and inventor.

- 2 Read the passage and find out what Franklin's experiment aimed to prove.

### □ Learning to learn ◀

An essay title often contains an explicit or implicit question which your essay should focus on answering. For example, the title "Franklin's Experiment: How Much Is True?" makes it clear what question is being answered within the essay.

# FRANKLIN'S EXPERIMENT: How Much Is True?

- 1 Benjamin Franklin's famous experiment with lightning has introduced generations of children to science. However, new research suggests that the story may be fiction instead of fact.
- 2 The well-known story is that the American Founding Father and scientist flew a kite during a storm in 1752. At that time, there was much interest in electricity. People wanted to know if lightning was really produced by electricity or something else. Franklin was one of them. He raised the kite with a piece of string tied to it. A metal key was attached to the string. A flash of lightning hit the kite, and electricity was conducted through the string to the key. Franklin then touched the key with his finger and got an electric shock. This, he said, proved that lightning was a form of electricity.



3 For many years, schools have taught the story of Franklin's lightning experiment. More than one generation of schoolchildren has been amazed by his bravery and his scientific approach to looking for the truth. Franklin, along with many other scientists, has inspired us and taught us that scientific experiments are important in order to establish the truth and to contribute

towards later scientific discoveries and inventions.

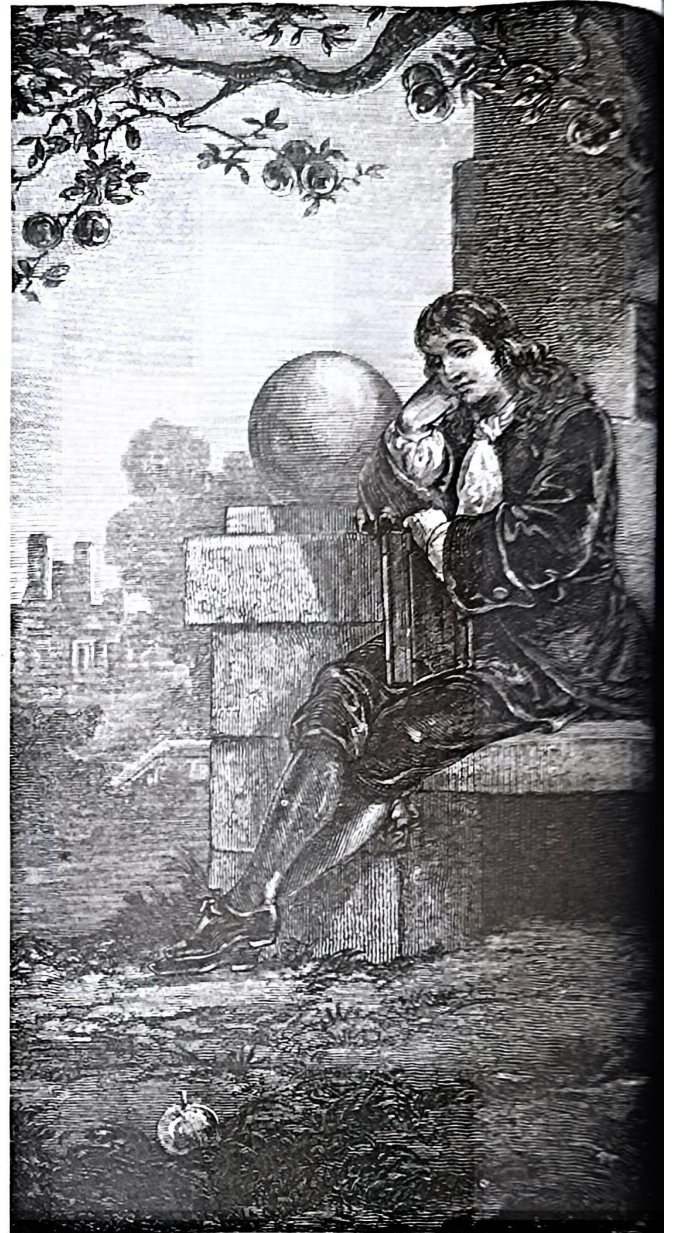
4 However, neither the story nor the details of the experiment are entirely true. Although it has been proved that Franklin's experiment took place, more than one scientist has questioned what really happened. The detail about the string and the key is true.





But scientists all agree that if Franklin had actually touched the key, he would certainly have died from the electric shock.

- 5 Scientists often question accepted ideas because they want to establish the facts. Some have even questioned the story about the apple that fell on Newton's head and led him to come up with his theory of gravity. In fact, more than one account suggests that while Newton was certainly inspired by a falling apple, there is no proof that it hit him on the head.
- 6 Admittedly, fiction is often more interesting than the truth. People have been more inspired by Franklin's spirit of scientific exploration than by the facts themselves. But in science, facts should be proved by experiments and research, and we should not always believe everything we read or hear – even if it is a great story.



**3** Number the statements to show how people's attitudes towards Franklin's experiment have changed.

- ☐ Franklin's spirit of scientific exploration is still considered an inspiration.
- ☐ People are amazed at and inspired by Franklin's experiment.
- ☐ Scientists question what really happened in Franklin's experiment.

- 1 Do you think it matters that Franklin's experiment might not be true? Why?
- 2 What is your opinion about the statement "... we should not always believe everything we read or hear – even if it is a great story"?
- 3 What qualities do you think a great scientist should have?
- 4 In what ways do scientists contribute to society?

**4** Work in groups. Explain your understanding of the saying "Seeing is believing", and then give a talk about it. You may use information in the passage as examples.

- 1 Make notes about your understanding of the saying and list supporting details.

<i>Your understanding</i>	<i>Supporting details</i>

2 Organise your talk following the steps below.

- Start your talk by explaining how you understand this saying.
- Explain why you think this way. Use the notes you have made to support your ideas.
- End your talk by summarising your points.

3 Give your talk to the class.