

Sir Isaac Newton

Sir Isaac Newton was an important scientist who is well known for his discoveries about **gravity** and light.



What Was Isaac's Childhood Like?

Isaac was born on 25th December 1642 in the village of Woolsthorpe in Lincolnshire. When he was a child, he spent a lot of time living with his grandmother before being sent to **boarding school**.

Did You Know...?

Isaac's mother wanted him to become a farmer and manage the family farm. However, he preferred to research and study.

What Did Isaac Learn About?

Isaac began at the University of Cambridge in 1661 where he started learning about ancient Greek thinkers called Aristotle and Plato. Their ideas about the world were believed to be the most important at that time. Isaac learnt a lot from Aristotle and Plato but he started to become interested in the new ideas about science which were becoming popular. He was keen to find new and different ways of explaining nature and the world around him.

What Scientific Discoveries Did Isaac Make?

Isaac carried out lots of experiments while in his hometown of Woolsthorpe. He started to experiment with light and he found that when white light passes through a **prism**, it separates into many different colours. This led him to discover that white light is made up of a mixture of colours called a spectrum.

Did You Know...?

Isaac spent a lot of time at home on the family farm in Lincolnshire because of an outbreak of the **plague** in Cambridge.

Many people tell the story of how Isaac discovered gravity while sitting under a tree in an orchard. It is said that an apple fell from the tree and landed on Isaac's head. This made him wonder why objects fall to the ground. Isaac wanted to understand why it is that things fall downwards towards the Earth instead of floating upwards into space. He then started to realise that this same pushing and pulling force was also causing the Moon to **orbit** around the Earth.



What Did Isaac Write?

After the plague, Isaac began working as a teacher at the University of Cambridge. In 1687, he released a famous book known as the 'Principia'. He explained his ideas about gravity in the book and he introduced his famous three laws of motion. These laws were important in explaining how objects move.

Glossary

boarding school: A school where children live during term time.

gravity: A force that pulls objects towards the Earth.

orbit: To repeatedly travel around a star, a planet or a moon.

plague: A dangerous disease which spreads rapidly.

prism: A transparent object which separates white light into a spectrum of colours.

Questions

1. Which year was Isaac born in? Tick one.

- ☐ 1661
- ☐ 1654
- ☐ 1642
- ☐ 1687

2. Which falling object led Isaac to discover gravity? Tick one.

- ☐ rock
- ☐ leaf
- ☐ apple
- ☐ branch

3. Draw **four** lines and match each word to the correct description.

Cambridge

Woolsthorpe

'Principia'

Aristotle

One of the ancient Greek thinkers that Isaac learnt about.

The name of Isaac's famous book.

The place where Isaac studied and worked as a teacher.

The village where Isaac was born.

4. How many laws of motion did Isaac write about? Tick one.

- ☐ five
- ☐ two
- ☐ four
- ☐ three

5. Look at the section called **What Scientific Discoveries Did Isaac Make?**

Find and copy a word which means 'when many people suddenly become sick with a disease'.

6. Fill in the missing words.

Isaac's mother wanted him to become a _____ and manage the _____ farm.

7. Look at the first paragraph of the text.
Why do you think that this has been included?

8. Explain why you think that Sir Isaac Newton is an 'important scientist'.

Answers

1. Which year was Isaac born in? Tick one.

- ☐ 1661
☐ 1654
☒ **1642**
☐ 1687

2. Which falling object led Isaac to discover gravity? Tick one.

- ☐ rock
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☒ **apple**
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3. Draw **four** lines and match each word to the correct description.

Cambridge	One of the ancient Greek thinkers that Isaac learnt about.
Woolsthorpe	The name of Isaac's famous book.
'Principia'	The place where Isaac studied and worked as a teacher.
Aristotle	The village where Isaac was born.

4. How many laws of motion did Isaac write about? Tick one.

- ☐ five
☐ two
☐ four
☒ **three**

5. Look at the section called **What Scientific Discoveries Did Isaac Make?**

Find and copy a word which means 'when many people suddenly become sick with a disease'.

outbreak

6. Fill in the missing words.

Isaac's mother wanted him to become a **farmer** and manage the **family** farm.

7. Look at the first paragraph of the text.

Why do you think that this has been included?

Pupils' own responses, such as: This section has probably been included because it gives the reader an introduction to who Isaac was and why he was important.

8. Explain why you think that Sir Isaac Newton is an 'important scientist'.

Pupils' own responses, such as: Isaac was an important scientist because he made some very important discoveries about light. He also came up with the idea of gravity and the three laws of motion.