

STEM - Week Beginning the 11th January

Focus: Science - Forces (lesson 2)

LO: I am learning about Sir Isaac Newton

Step 1: Watch this video to remind yourself all about what gravity is.

<https://www.bbc.co.uk/bitesize/topics/zf66fg8/articles/zqbm3k7>

Step 2: This is Sir Isaac Newton



<https://www.bbc.co.uk/teach/class-clips-video/science-ks2-the-work-of-sir-isaac-newton/zkw3qp3> (watch this video clip)

Step 3: Task

Your job is to persuade us that Isaac Newton is the greatest scientist of all time.

- 1) You will need to use the information in the support pack below to gather facts to support your work.
- 2) You need to create a poster all about Isaac Newton and what he discovered and explain why he might be the greatest scientist of all time. (You may hand draw or create on a computer)

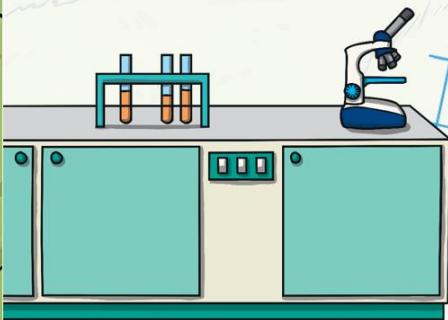
Who is Sir Isaac Newton?

Sir Isaac Newton was one of the most important English scientists that ever lived. He was the man who discovered gravity.



Sir Isaac Newton's life?

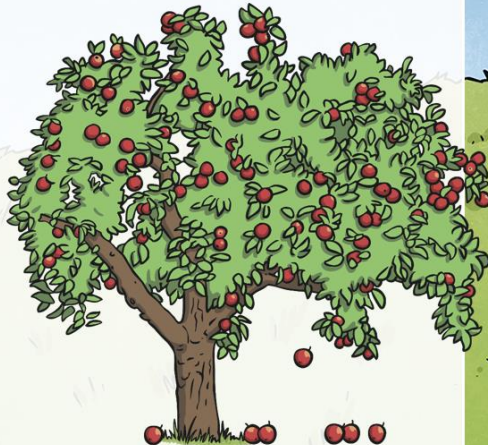
- He was born in 1643 in Lincolnshire.
- He was brought up by his grandparents.
- When he was old enough, he went to Cambridge University and studied maths and science.
- In the 1680s Sir Isaac Newton discovered the law of gravity.
- He died 1727.



$$1 + 2 = 3$$

The Discovery of Gravity

One day, while he was sitting under a tree, an apple fell off the tree and hit him on the head. He thought that there must be a reason why the apple fell off the tree. He worked out that something must be pulling the apple downwards and, after much more thinking, he worked out that it was the Earth that was pulling down the apple.



Biographies for Kids

Isaac Newton

Back to [Biographies](#)

- **Occupation:** Scientist, mathematician, and astronomer
- **Born:** January 4, 1643 in Woolsthorpe, England
- **Died:** March 31, 1727 in London, England
- **Best known for:** Defining the three laws of motion and universal gravitation

Biography:

Isaac Newton is considered one of the most important scientists in history. Even Albert Einstein said that Isaac Newton was the smartest person that ever lived. During his lifetime Newton developed the theory of gravity, the laws of motion (which became the basis for [physics](#)), a new type of mathematics called calculus, and made breakthroughs in the area of optics such as the reflecting telescope.

Early Life

Isaac Newton was born in Woolsthorpe, England on January 4, 1643. His father, a farmer who was also named Isaac



Isaac Newton by Godfrey Kneller

Newton, had died three months before his birth. His mother remarried when Isaac was three years old and left young Isaac in the care of his grandparents.

Isaac attended school where he was an adequate student. At one point his mother tried to take him out of school so he could help on the farm, but Isaac had no interest in becoming a farmer and was soon back at school.

Isaac grew up mostly alone. For the rest of his life he would prefer to work and live alone focused on his writing and his studies.

College and Career

In 1661, Isaac began to attend college at Cambridge. He would spend much of his life at Cambridge, becoming a professor of mathematics and a fellow of the Royal Society (a group of scientists in England). He eventually was elected to represent Cambridge University as a member of parliament.

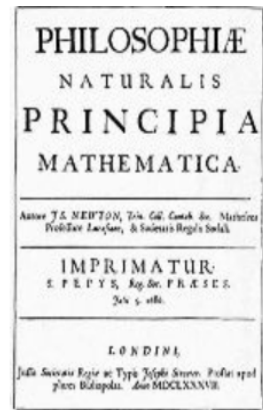
Isaac had to leave Cambridge from 1665 to 1667 because of the Great Plague. He spent these two years in study and isolation at his home in Woolsthorpe developing his theories on calculus, gravity, and the laws of motion.

In 1696 Newton became the warden of the Royal Mint in London. He took his duties seriously and tried to get rid of corruption as well as to reform the currency of England. He was elected President of the Royal Society in 1703 and was knighted by Queen Anne in 1705.

Scientific Discoveries

Isaac Newton made many scientific discoveries and inventions throughout his career. Here is a list of some of the most important and famous ones.

- Gravity - Newton is probably most famous for discovering gravity. Outlined in the Principia, his theory about gravity helped to explain the movements of the planets and the Sun. This theory is known today as Newton's law of universal gravitation.
- Laws of Motion - Newton's laws of motion were three fundamental laws of physics that laid the foundation for classical mechanics.
- Calculus - Newton invented a whole new type of mathematics which he called "fluxions." Today we call this math calculus and it is an important type of math used in advanced engineering and science.
- Reflecting Telescope - In 1668 Newton invented the [reflecting telescope](#). This type of telescope uses mirrors to reflect light and form an image. Nearly all of the major telescopes used in astronomy today are reflecting telescopes.



Legacy

Newton died on March 31, 1727 in London, England. Today, he is considered one of the most influential scientists of all time alongside greats such as Albert Einstein, Aristotle, and Galileo.

Interesting Facts about Isaac Newton

- He studied many classic philosophers and astronomers such as Aristotle, Copernicus, Johannes Kepler, Rene Descartes, and Galileo.
- Legend has it that Newton got his inspiration for gravity when he saw an apple fall from a tree on his farm.
- He wrote his thoughts down in the Principia at the urging of his friend (and famous astronomer) Edmond Halley. Halley even paid for the book's publication.
- He once said of his own work "If I have seen further than others, it is by standing upon the shoulders of giants."