

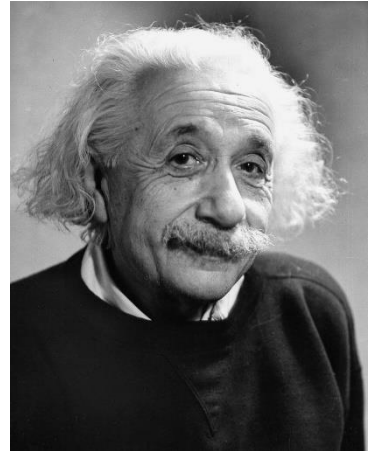
Albert Einstein Facts

Full name: Albert Einstein

Born: 14 March 1879

Occupation: Scientist specialising in physics, also known as a theoretical physicist*

Died: 18 April 1955



Best known for: His theory of relativity*

1. Albert Einstein was born in Germany, but lived in Italy, Switzerland and Czechia (which was then part of the Austro-Hungarian Empire), until he eventually moved to the United States in 1933.

Albert never went back to Germany after moving to the **USA**. He **didn't feel safe** in Germany because of the events that led to **World War 2**, and instead settled down to life in the American town of **Princeton, New Jersey**.

2. When Albert was a boy, he fell in love with physics when his father gifted him a compass.

He was fascinated by the way the **magnets** moved inside of the compass, and thought about this when he was older and coming up with his theories around relativity.

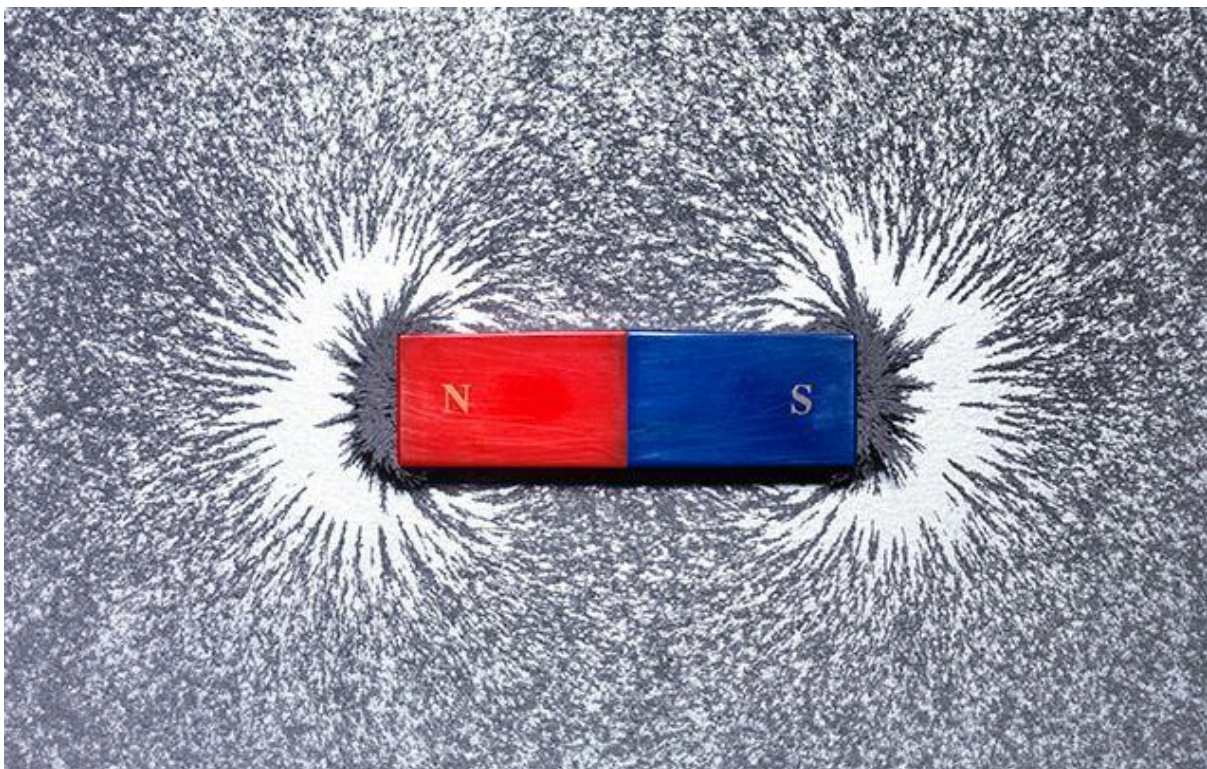


3. Albert hated the strict discipline of the grammar school he attended as a teenager, and left aged 15...

While at school, he excelled at **maths**, **physics**, and **philosophy**, but struggled with other subjects like **languages**.

4. ...but he still managed to write his first scholarly paper at just 16 years old!

The paper was inspired by his compass, and discussed the force of **magnetism**.

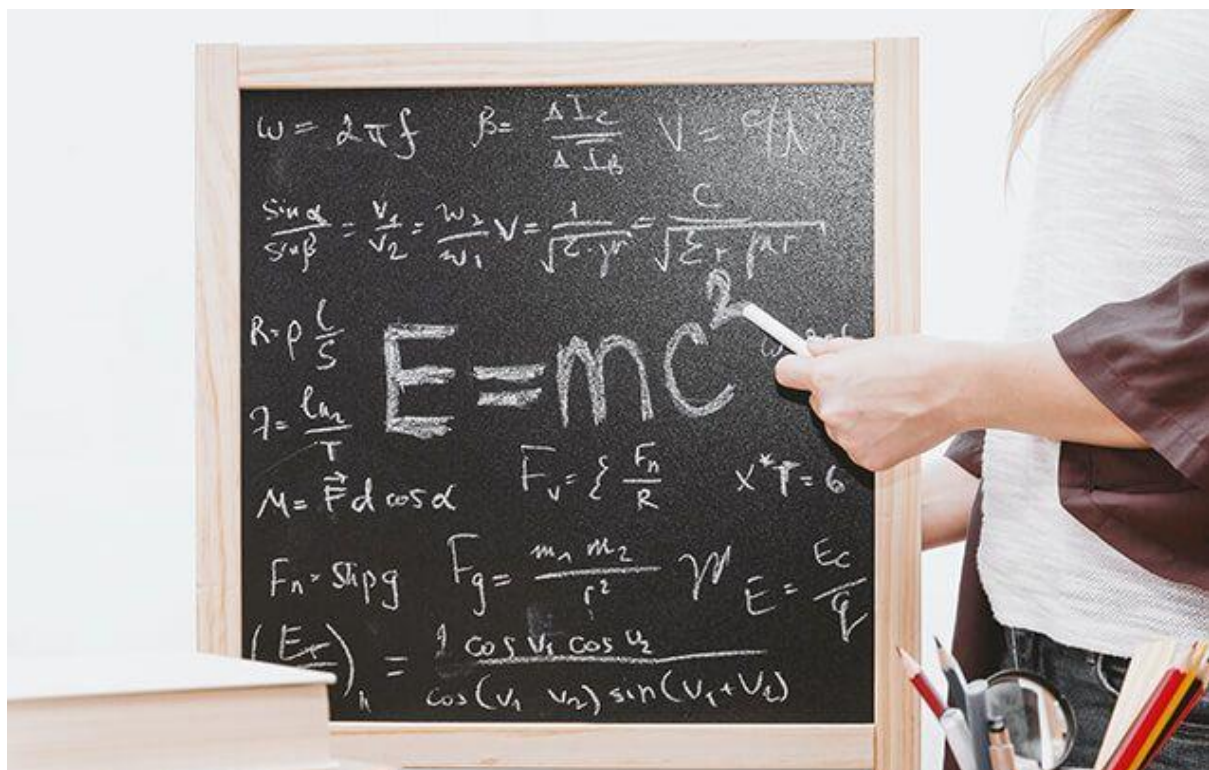


5. Rather than becoming a physicist straight away, Albert first trained as a teacher.

In 1896, he was accepted into the **Swiss Federal Polytechnic School** in Zürich, Switzerland. He originally failed the entrance exam, but was let anyway due to his **exceptional maths results!** However, this was on the condition that Albert also went to **high school** and finished his formal schooling.

6. After failing to find work as a maths and physics teacher, Albert decided to obtain a Ph.D. in physics.

He obtained this degree in **1905** - a year that came to be known as Albert's "**year of miracles**", because he published **four ground-breaking papers** in just 12 months!



7. One of the discoveries Albert announced in 1905 was his famous formula: $E=mc^2$

Albert figured out that **matter** - the tiny **particles** that make up everything in the world - can be turned into **energy**. The

equation, $E=mc^2$, describes how this conversion can be achieved. This amazing breakthrough made the 26-year-old Albert Einstein a star!

8. The formula formed part of Albert's 'general theory of relativity', which he worked on over the next ten years.

Other scientists, for example Dutch physicist **Hendrik Lorentz**, had already been forming pieces of the theory. However, Albert was the first one to put the whole thing together. He published the complete theory in **1915**, where it wowed the world!



9. Albert's theory of relativity helped scientists understand how the universe works.

Albert's theory showed that the effects of **gravity** result from the ways that objects affect **space** and **time**. These interactions can only been seen on **enormous objects** like the planets. As a result, Albert's **general theory of relativity** describes the way that **amazing phenomena** like the movement of planets, the birth

and death of stars, black holes, and evolution of the universe, are possible.

10. He went on to win The Nobel Prize in Physics in 1921.

The Nobel Prize is an award for **major scientific accomplishments** - and by the time Albert won it, he and his discoveries were famous around the world. He continued working on theories until his death in **1955**, aged 76.

*A theoretical physicist is a scientist who try to figure out how the world and universe works.