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Can you feel the Force?

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Who's who?

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The brilliant scientist and mathematician Sir Isaac Newton once said, "If I have seen farther, it was by standing on the shoulders of giants." Newton meant that his own work was built on the work of the great scientists who lived before him. Here are some of the biggest names in physics, starting in ancient Greece.



ARISTOTLE 384–322 BCE

One of the great thinkers of the ancient world, the Greek philosopher Aristotle was an expert on subjects from anatomy and astronomy to physics and philosophy. He was a tutor to Alexander the Great and a lecturer at the greatest school in Greece. He valued knowledge gained from observing nature and said, "Nature does nothing uselessly".



ARCHIMEDES 287–212 BCE

A Greek mathematician, astronomer, physicist, and engineer, Archimedes invented war machines and a device to lift water uphill. His most famous moment (when he sprang out of the bath shouting "Eureka!") came when he discovered that the king's crown wasn't solid gold, because it displaced more water than the same weight of pure gold.



COPERNICUS 1473–1543

The Polish astronomer Nicolas Copernicus believed that the Sun, not the Earth, is the centre of the Universe, and that the planets revolve around the Sun. Although this idea offended the ruling Catholic Church, his work helped later scientists unravel the forces that govern the Universe, and it formed the basis of modern astronomy.



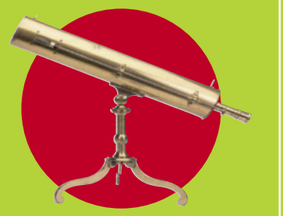
GILBERT 1544–1603

A distinguished London doctor (and physician to Elizabeth I), William Gilbert is best known for his research into electricity and magnetism. In his book *De Magnete* (*On Magnetism*), he explained how magnets attract and repel. He also showed that Earth is like a giant bar magnet, which is why a compass needle always points north.



GALILEO 1564–1642

The Italian scientist Galileo Galilei used a telescope of his own design to study the Moon, Sun, stars, and to discover Jupiter's moons. He rolled balls down ramps in experiments on gravity and discovered that all falling objects accelerate at the same rate. His views on astronomy led the Church to place him under house arrest for the last years of his life.



NEWTON 1642–1727

The English scientist Isaac Newton often tops polls as the greatest scientist ever, but he had strange religious ideas and believed in alchemy (a magical form of chemistry). Best known for working out how gravity holds the Universe together, he also published theories of colour. He was very sensitive to criticism and fell out with many of his contemporaries.



FRANKLIN 1706–1790

One of the founding fathers of America, Benjamin Franklin was a prominent politician and diplomat as well as a scientist. He discovered that lightning is a form of electricity by flying a kite in a storm, and he invented the lightning conductor. He was the first person to describe electricity as having positive and negative forms.



VOLTA 1745–1827

Italian physicist Alessandro Volta did not speak until he was four but soon caught up with his classmates. He invented the first battery by discovering that an electric current could flow between two metals in a solution. His fame spread and he performed experiments in front of Napoleon. The basic unit of electric force was named the volt in his honour.



Volta's battery