**Archimedes**

Archimedes was one of the most famous scientists in [Ancient Greece](http://www.theschoolrun.com/homework-help/greek-life-and-culture). He was perhaps best known for being a great mathematician.

Despite being recognised today for his understanding of mathematics and physics, he was more acknowledged in his own time for the contribution he made to creating war machines to help protect his home in Syracuse from the Romans.

Top 10 facts

1. It is believed Archimedes was born 287 BC in Syracuse in Sicily, but we don't know his exact birth date.
2. Archimedes was killed by a Roman soldier when the Romans were conquering Syracuse.
3. Archimedes didn't invent the simple machine called the lever, but he helped explain how the lever works.
4. A biography on Archimedes was written by a friend of his, Heracleides, but this was later lost.
5. A lot of the information we have about Archimedes is anecdotal, which means that it is probably based in truth but has been added to with lots of details over thousands of years. For example, the story that Archimedes made an exciting discovery while soaking in his bath tub and ran through the streets naked shouting "Eureka!" ("I have found it!" in Greek) is probably not true!
6. As a way to honour Archimedes, a crater of the moon has been named after him.
7. Archimedes was so far ahead of his time in mathematics, it took a further 1800 years before his work was fully understood by [Sir Isaac Newton](http://www.theschoolrun.com/homework-help/sir-isaac-newton).
8. Archimedes is credited with inventing the Archimedes screw, a simple machine for moving water that is still used today.
9. Archimedes was behind the understanding of the formula of density.
10. It is said that Archimedes enjoyed teasing other mathematicians, giving them the answer to a complex question but not helping them to understand how he had worked it out

Did you know?

* Much of the work Archimedes did was based around understanding and explaining how and why things worked.
* He was the first recognised scientist to apply the use of physics to solve pure mathematical problems such as the explanation of the law of the lever.
* Devices created by Archimedes are still in use today. For example, the Archimedes Screw pulls water from the ground very easily and efficiently.
* According to one story told about Archimedes, King Hieron II of the city-state of Syracuse was worried makers of his crown were not using solid gold to manufacture it but replacing some of the gold with less valuable material such as silver. The king asked Archimedes to find a way to discover if this was true. Archimedes is said to have come up with the way to work out density of material while he was taking a bath (not quite the bath tubs we have now, more a wooden tub!) as the displacement of the water in his bath helped the theory come to him. He is said to have jumped out shouting ‘Eureka!’ and running the streets in excitement!
* Archimedes is also credited with discovering a very accurate estimate for the value of pi in advanced mathematics.
* Cranes used today and complex pulley system are a direct result of the work Archimedes did with levers and pulleys.

 Can you identify the following images in the gallery below?

* Mathematical sign for pi
* The moment Archimedes’ realised he could tell if the king’s crown was solid gold
* The principle of the lever
* The Archimedean Screw



Archimedes was one of the greatest scientists in the Ancient world. He had a number of strings to his bow. Most commonly known these days for his advanced mathematics, he was also recognised as a weapons designer, engineer, inventor, astronomer (his father was also an astronomer), physicist and all-round scientist.

Though Archimedes was very interested in mechanics (and his work on simple machines suggests this), he didn't feel it was important enough to write about and all the books we know he wrote were about scientific theory, not its practical application.

Some of his most famous achievements include:

* A physical principle now known as the Archimedes’ principle, which explains why heavy objects like ships float in water.
* Archimedes also offered mathematicians the most precise value of the unknown entity pi (the symbol used in maths to represent the ratio of a circle's circumference to its diameter, π).
* His work to help understand the concept of volume and surface area of a sphere proved he was years ahead of his time.
* The Archimedes Screw is thought to have been introduced to Egypt by Archimedes, though we do not know if he invented it. The "screw pump" moves water by turning a screw-shaped surface inside a pipe. This very simple machine works very well and is still commonly used today.