Archimedes.

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- **Born:** 287 BCE
- **Birthplace:** Syracuse, Italy
- **Died:** 212 BCE
- **Place of death:** Syracuse, Italy

Archimedes was a Greek mathematician and inventor. He is famous for coming up with the theory known as Archimedes' principle.

Archimedes. Engraving from the book Les vrais pourtraits et vies des hommes illustres grecz, latins et payens See page for author [Public domain], via Wikimedia Commons

Depiction of Archimedes, moments before his death. F.R. Niglutsch

Early Life

Archimedes was born in 287 BCE in Syracuse. This city was a port in Sicily. He was born to an astronomer named Phidias. Archimedes went to school in Alexandria, Egypt. He studied geometry, mathematics, and astronomy. He also studied mechanics. Mechanics is the science of motion in machines. After completing his studies, Archimedes returned to Greece. Very little is known about his personal life. Archimedes was famous throughout Greece for his original inventions. Historians believe he was a close associate of King Hieron II of Greece.

Works

As a child, Archimedes was extremely curious. He tried to solve the kinds of problems that Greeks encountered every day. Many of his inventions made daily tasks easy. The water screw was one of his inventions. It is also called the Archimedes' screw. Archimedes designed it to pump out excess water from a ship. Some developing countries still use the water screw for irrigation.

Archimedes' principle is one of the most famous scientific theories. According to this principle, a force pushes up an object placed in water. This force is equal to the amount of water the object displaces. Different materials displace different quantities of water. Archimedes established this theory in response to the king's question.

The king asked Archimedes to check the purity of a gold crown. The king thought that the crown contained some silver. Archimedes used his principle to prove the king correct. In fact, crown did contain some silver.

Archimedes also created many machines for the Greek army. He used many large mirrors to build a curved mirror. The sunlight that was reflected from the curved mirror formed one ray. This ray was directed at enemy ships. Its heat set the ships on fire. The claw of Archimedes was one of his famous inventions. This weapon was designed like a metal crane. It had a large iron claw at one end. The claw would grab enemy ships. It picked them up and dropped them back into the sea. The force of hitting the water damaged the ships. Archimedes also wrote many books on geometry and mathematics. He explained many complex concepts in these books. Archimedes calculated the area of a circle and the volume of a sphere. He also estimated the value of pi. Pi is a mathematical ratio.

Death

The Roman general Marcellus captured Syracuse in 212 BCE. A Roman soldier killed Archimedes during the capture of this city. Archimedes was seventy-five years old when he died. The Romans captured two of his scientific models. One of the models showed the motions of the sun, the moon, and the earth. Many of his calculations and observations were lost in the siege. A few of his findings were preserved. They greatly influenced future mathematicians.

Bibliography

Books

O'Neal, Claire. *Archimedes* . Hockessin: Mitchell Lane, 2013.

Websites

Toomer, Gerald J. "Archimedes." *Encyclopaedia Britannica.* Encyclopaedia Britannica, Inc., 22 June 2017, https://www.britannica.com/biography/Archimedes.

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