

Archimedes

Early life

Archimedes was born in the year 287 BC in the city of Syracuse, Italy. Growing up, his father was an astronomer, and was related to the king of Syracuse, who was at the time Hieron II. He was a very smart man at his time, and discovered many things such as the pressure of an object when put in a container of water. He invented this by one day filling his bathtub all the way to the top with water, then he took a bath. When he got in, the water overflowed. When he discovered this, he was so excited that he ran down the street naked yelling "*Heureka!*" which means, "I have found it". Then, in the year 213 BC, Syracuse was attacked by the Roman empire, and Archimedes was called on to help invent machines to defend the city. Some of these consisted of the Archimedes hook, catapults, stone throwers, and the death ray. These delayed the Romans, but they eventually got into the city and attacked it. Archimedes sadly died in the autumn of 212 BC when they captured the city and he was captured. He refused to leave his mathematical calculations and then killed for being ignorant.

Archimedes' war machines.

Some of the machines that Archimedes invented when Syracuse was being attacked consisted of the death ray, the Archimedes claw, catapults, and the stone thrower. The death ray was a piece of glass or mirror that was positioned so that it reflected the rays of the sun onto enemy boats causing them to burn and sink. The Archimedes claw was famous for lifting boats out of the water and swinging them around and sinking them. The catapults launched debris such as rocks, logs, and other items at incoming boats and men. And finally, the stone thrower launched stones and timber onto boats and troops to destroy them.

Archimedes discovery

One day in Syracuse, Italy, Archimedes was going to take a bath. So he filled up his bath and stepped in. To his surprise, when he stepped into the tub, it overflowed and the water spilled all over the floor. Upon discovering this, he leapt from the tub and ran down the street yelling "*Heureka!*" which translates into "I have found it!" he actually discovered that when you put an object in a liquid, the upward object submerged has the same area as the liquid, and therefore pushes it up since it's lighter. An example is that if you have an orange, for example, that's area is $\frac{1}{4}$, and you put it into a container that's area is $\frac{4}{4}$, or 1 whole, then the water will overflow due to the fact that it is lighter, and the force of the orange forces it upwards. Another discovery by Archimedes was that a sphere takes up $\frac{1}{3}$ of a cylinder.