

How do we know when they happen?

People have been predicting eclipses for thousands of years, even though they weren't sure what was happening! (Have a look at the [myths and legends](#) page)

The most important thing was to have a sequence of dates as to when an eclipse had occurred in the past. This was then combined with watching the sky, working out the timings of the phases of the moon as well as trying to work out how the 'wandering stars' (planets) move.

Then you get some very clever person who can do maths and voila!

Telescopes were only invented in the 1600s due to the difficulty in producing optically clear glass to make the lenses leaving thousands of years for people to argue how they would work, especially if people weren't allowed to believe that the Earth was anywhere but in the centre of the universe!

After the invention of the telescope Galileo and others saw the moons of Jupiter and rewrote the mechanism of the solar system, risking their lives by specifically questioning the idea that the Earth was in the middle and celestial bodies revolved around it.



Which gives the opportunity of what can be described as the world's first computer.

The Antikythera Mechanism a 2200 year old computer



In 1901 a shipwreck was discovered which included a corroded lump of bronze. Several years later it was noticed that it contained a metal cog. Something that was rare in ancient Greece.

The greatest breakthrough however was in the 1970s when it became possible to do an x-ray of the interior which showed cogs and dials assembled together to predict the positions of the Earth in relation to: the sun, 'wandering stars' (planets) and the moon.

An amazing, almost science fiction piece of technology had been discovered which was invented over 2000 years ago.

A 7 minute BBC video [can be found here](#)