Hey! Do you know that the sun revolves around the earth?

What?! Is that a joke?

How do you know its wrong?

Come on dude! Its a fact!

Its A FACT!

We all know it now. But ever wondered that was it a 'fact' ages before?

Of Course scientific facts do not occur without a reason or proof.

"History of revolution of earth"

Nicolaus Copernicus

Through most of our history, humankind hardly understood anything about the universe -- yet always thought we were at the center of it. That is, however, until Nicolaus Copernicus came along in the 16th century.

Astronomy was in a pretty sorry state as calendars were embarrassingly out of sync with the seasons. To explain this and other discrepancies, Copernicus set out to prove Aristotle's theory that the Earth was in motion, with the sun at the center of the picture.

His new hypothesis inspired the first accurate diagrams of the solar system and -- although the Catholic Church wasn't too fond of it -- this big idea paved the way for future groundbreaking astronomical discoveries

To prove this, Copernicus came out with a model called *Copernican heliocentrism*.

Aristarchos

Aristarchus of Samos, the "Copernicus of antiquity" (310-230 BC.) is credited by the Greek mathematician and inventor Archimedes to the hypothesis that the Sun, and not the Earth is the center of planetary motion. At the time, few people believed this hypothesis, though most believed the Earth rotated about its axis. These people rejected Aristarchus' hypothesis because they believed that the appearance of the fixed stars would change in different parts of the Earth's orbit, but Aristarchus thought that the distance of the fixed stars was so great this effect was noticeable. Aristarchus wrote a discourse, "On the sizes and distances of the Sun and the Moon." Through a series of observations he discovered the ratios of the Sun's and Moon's distances from the Earth, and the ratio of their sizes compared to the size of the Earth.

Aristarchus believed the stars to be very far away, and that in consequence there is no observable <u>parallax</u>, that is, a movement of the stars relative to each other as the Earth moves around the Sun. The stars are much farther away than was generally assumed in ancient times; and since <u>stellar parallax</u> is only detectable with <u>telescopes</u>, his speculation although accurate was unprovable at the time.

The heliocentric theory was successfully revived nearly 1800 years later by <u>Copernicus</u>, after which <u>Johannes Kepler</u> and <u>Isaac Newton</u> gave the theoretical explanation based on laws of physics, namely Kepler's laws for the motion of planets and Newton's laws on gravitational attraction and dynamics.

And hence Aristarchos too had a contribution in proving that the earth revolves around the sun.

Galileo Galilei

Galileo was one of the greatest astronomers in the world. He changed the way we think about the universe. Galileo was the first person to use a telescope to look at the universe. He studied the sun, the planets, and the moon.

Galileo went on to propose a theory of tides and of comets. He argued that the tides were evidence for the motion of the Earth, and promoted the <u>heliocentric</u> theory of <u>Copernicus</u>.

Before Galileo, people believed the earth was the center of the universe and the sun revolved around the earth. This theory is known as the *Ptolemaic theory*. It is named after the Roman astronomer *Ptolemy*. The Greek philosopher *Aristotle* and the *Roman Catholic Church* also believed the sun revolved around the earth.

The Copernican theory was considered a serious challenge to the Ptolemaic theory and the Roman Catholic Church. Copernicus died before he could prove his theory. Galileo studied the Copernican theory and set out to prove or disprove it. He did this by observing the universe through the telescope.