

While Galileo firmly believed in Copernicus's theory that the Earth was not the center of the universe, he did not believe in his Kepler's theory that the moon caused the tides. In the last year of his life, when he was totally blind, Galileo designed an escapement mechanism for a pendulum clock called Galileo's escapement.

Galileo was said to have dropped two cannon balls of different masses from the leaning tower of Pisa to demonstrate that their speed of descent was independent of their mass. Galileo never married and had all his children out of wedlock with Marina Gambia, whom he met on a trip to Venice.

The middle finger of Galileo's right hand has been exhibited at the Museo Galileo in Florence, Italy. Galileo was a ground breaking astronomer, physicist, mathematician, philosopher and inventor. Among his inventions were telescopes, a compass and a thermometer. Galileo enrolled to do a medical degree at the University of Pisa but never finished, instead choosing to study mathematics.

Considered the father of modern science, Galileo Galilei (1564-1642) made major contributions to the fields of physics, astronomy, cosmology, mathematics and philosophy. He invented an improved telescope that let him observe and describe the moons of Jupiter, the rings of Saturn, the phases of Venus, sunspots and the rugged lunar surface.

Did you know? After being forced during his trial to admit that the Earth was the stationary center of the universe, Galileo allegedly muttered, "Eppur si muove!" ("Yet it moves!"). The first direct attribution of the quote to Galileo dates to 125 years after the trial, though it appears on a wall behind him in a 1634 Spanish painting commissioned by one of Galileo's friends.

In 1609 Galileo built his first telescope, improving upon a Dutch design. In January of 1610 he discovered four new "stars" orbiting Jupiter—the planet's four largest moons. He quickly published a short treatise outlining his discoveries, "Siderius Nuncius" ("The Starry Messenger"), which also contained observations of the moon's surface and descriptions of a multitude of new stars in the Milky Way. In an attempt to gain favor with the powerful grand duke of Tuscany, Cosimo II de Medici, he suggested Jupiter's moons be called the "Medician Stars."

**“The Starry Messenger” made Galileo a celebrity in Italy. Cosimo II appointed him mathematician and philosopher to the Medici, offering him a platform for proclaiming his theories and ridiculing his opponents. Galileo’s observations contradicted the Aristotelian view of the universe, then widely accepted by both scientists and theologians. The moon’s rugged surface went against the idea of heavenly perfection, and the orbits of the Medician stars violated the geocentric notion that the heavens revolved around Earth.**

**Nearly 70 at the time of his trial, Galileo lived his last nine years under comfortable house arrest, writing a summary of his early motion experiments that became his final great scientific work. Galileo’s motion experiments paved the way for the codification of classical mechanics by Isaac Newton. His heliocentrism (with modifications by Kepler) soon became accepted scientific fact. His inventions, from compasses and balances to improved telescopes and microscopes, revolutionized astronomy and biology.**

**Galileo was a hugely influential Italian astronomer, physicist and philosopher. In 1609, Galileo heard about the invention of the telescope in Holland. Without having seen an example, he constructed a superior version and made many astronomical discoveries.**

**These included mountains and valleys on the surface of the moon, sunspots, the four largest moons of the planet Jupiter and the phases of the planet Venus. His work on astronomy made him famous and he was appointed court mathematician in Florence. Although he was now going blind he continued to write. In 1638, his 'Discourses Concerning Two New Sciences' was published with Galileo's ideas on the laws of motion and the principles of mechanics. Galileo died in Arcetri on 8 January 1642.**