Galileo Galilei

ALSO LISTED IN	Philosophers, Astronomers, Mathematicians, Physicists
FAMOUS AS	Astronomer, Mathematician, Philosopher, Rebel Scientist, Physicist
NATIONALITY	Italian Famous Italian Men
BORN ON	15 February 1564 AD Famous 15th February Birthdays
ZODIAC SIGN	Aquarius Aquarius Men
BORN IN	Pisa
DIED ON PLACE OF DEATH	
FATHER	Arcetri
MOTHER	Vincenzo Galilei
SIBLINGS	Giulia Ammannati Michelagnolo
SPOUSE:	Marina Gamba
CHILDREN	Maria Celeste, Livia, Vincenzo Gamba
EDUCATION	University of Pisa, University of Padua
DISCOVERIES / INVENTIONS	Telescope, Ballistics Calculation Geometric, Military Compass,Jupiter's Four Largest Satellites (moons)

08 January 1642 AD Often remembered as the Father of Modern Astronomy, Galileo Galilei was one of the most celebrated and illustrious astronomers, mathematicians and physicists in the history of mankind. He played a major role and was instrumental in establishing the scientific revolution. Galileo is credited for developing much of the modern concepts, which have proved to be the foundation on which research is conducted in the present times. Throughout his life, Galileo greatly contributed to astronomical observatory. He bettered the telescope, which assisted him in his discoveries. He also dismissed the Aristotelian view which was dominant in that era and supported Copernicanism. His contribution in the field of astronomy includes the telescopic confirmation of the phases of Venus, the discovery of the four largest satellites of Jupiter, and the observation and analysis of sunspots. Furthermore, he invented an improved military compass and other instruments in the field of applied science and technology. It was his prophesizing the heliocentric view and supporting Copernicanism that irked the Roman Catholic Church and resulted in his lifelong conflict with the same. Nevertheless, with the dawn of the 20th century, the Church lifted the ban imposed on Galileo's books and acclaimed him as the Father of Modern Sciences.

Academic Career

- Upon leaving university, Galileo set his mind to create a thermoscope, which was the precursor to the presently used thermometer. He then published a small book which highlighted his work on hydrostatic balance, titled 'The Little Balance'. It was this work that brought Galileo recognition and name in the scholarly world
- To support himself, Galileo took up the job as an instructor at Accademia delle Arti del Disegno in Florence; his profile included teaching perspective and chiaroscuro. Simultaneously, he studied disegno and became quite interested in the artistic traditions of the city. Galileo also developed a profound interest in the works of Renaissance artists
- No sooner than in 1589, Galileo was promoted to the chair of Mathematics at the University of Pisa. During his term at Pisa, Galileo conducted his famous experiment of dropping items of varied weight from the top of the Leaning Tower.
- It was through the findings of the experiments that Galileo rejected Aristotle's claim that speed of the falling object is directly proportional to its weight. He mentioned the outcome of the experiment in his

paper titled Du Motu (On Motion). Instead of taking Aristotle's view of motion, Galileo took Archimedean approach to the problem.

- Due to his rejection of Aristotelian view, Galileo gained an unpopular status within the society. In 1592, His contract was also not renewed at the University of Pisa which led him to losing his position. However, Galileo's patrons helped him secure the chair of mathematics at the University of Padua, which he served for eighteen years.
- At the University of Padua, Galileo taught young students on the subjects of geometry, mechanics and astronomy. The appointment came at the perfect time as due to the death of his father, Galileo had to step in the shoes of the head of the family.
- Since the university salary was not enough to cover all the expenses of the family and for the treatment of his younger brother Michelagnolo, Galileo took to teaching privately well-to-do boarding students. EDIT

His Discoveries

was during his years at the University of Padua that Galileo made significant discoveries in the field of pure fundamental science as well as practical applied science. It was the discovery of an instrument in Netherlands that had the ability to show distant things seem close that propelled Galileo to work out on the concept. He not only mastered the secret of the invention and came up with his own version of the spyglass, in no time he bettered his own technique to improve upon the instrument. Galileo learned the art of lens grinding, which helped him produce increasingly powerful telescope. He presented the same to Venetian Senate, who impressed by the discovery rewarded with life tenure and a doubling of his salaryFurther working on the functioning of the telescope, Galileo bettered the instrument so much so that it could magnify up to 20 times and helped him have a clear vision of the Moon and its surface. It was through Galileo's telescope that Moon's rocky and uneven surface first came to limelight.

In 1610, Galileo discovered the moons revolving around Jupiter. He also claimed that there were a great number of stars that are there in the universe than those visible through naked eye. He even discovered that Venus goes through phases just as the Moon does and that Saturn appearance was different from those of other planetsThe ground-breaking discoveries made by Galileo were written in a small book, titled 'Sidereus Nuncius' (The Starry Messenger). He dedicated the book to Cosimo II de Medici, the grand duke of his native Tuscany. Impressed by the earth-shaking research made by Galileo, he was rewarded with an appointment as mathematician and philosopher of the Grand Duke of Tuscany

Galileo's discoveries though did not prove the fact that Earth was a planetary body and revolved around the Sun, it did dismiss Aristotelian cosmology and instead favoured Copernicus theory that Sun is the centre of the universe and that the Earth is a planet. Also Aristotle's claim of each body in the universe other than the Earth being perfect and unchanging was also challenged and proven wrongNext Galileo turned his attention towards what made certain objects float in water. He again negated Aristotle's opinion that objects floated due to their flat shape. Instead, he argued that the floatation was caused due to the weight of the object in relation to the water it displaced. He mentioned the same in his 1612 published work, 'Discourse on Bodies in Water'. EDIT

Following year, Galileo came up with his theory of sunspots, which he explained in his book 'Istoria e dimostrazioni intorno alle macchie solari e loro accidenti' (History and Demonstrations Concerning Sunspots and Their Properties). In it again, Galileo contradicted Aristotelian doctrine that the sun was perfect. EDIT

Galileo further stated that Copernican theory did not refute the Biblipassages. Instead, they provided a different, more accurate perspective about things. However, his defending the Copernican theory earned him a ban from the Church which prohibited his teaching or holding the theory, to which he conceded.

Each of Galileo's discoveries made him deviate away from Aristotelian view and take a step forward in favouring Copernicanism so much so that by the end of it all, Galileo converted to Copernicanism, which proved to be a key turning point in the scientific revolution. EDIT

With the emergence of a new Pope Urban VIII, who fortunately was a friend, admirer and patron of Galileo, Galileo resumed his works on astronomy. He was allowed to publish books as well, with the only condition that they provided an

In 1632, Galileo came up with his book, 'Dialogue Concerning the Two Chief World Systems, Ptolemaic & Copernican'. The book dealt with views and opinions of three people. While the first supported Copernicus' heliocentric theory of the universe, the second argued against it. The third person was objective and had an unbiased line of belief.

Though Galileo claimed the book to be neutral and impartial, it spiked a negative reaction from the Church, and Galileo was summoned to Rome by the Church. During the proceedings of Inquisition, Galileo was treated with respect and was never imprisoned. He in fact put up at the house of the Tuscan ambassador to the Vatican.

It was only during the final attempt that Galileo admitted that he supported the Copernican theory. Post the Inquisition, Galileo was convicted of heresy and put under house arrest.

He spent the first six months at the palace of Ascanio Piccolomini, after which he moved to a villa near Arcetri, in the hills above Florence, where he spent the last days of his life.