

ISAAC NEWTON

Thirsting for knowledge, questing for wisdom, only man whose theories gave meaning to things around us is Isaac Newton. From that apple wonder, we all seem on to ponder what else we could dig out.

Isaac Newton is said to be one of the most influential scientists of all times. From being a mathematician, he also proudly held the qualities as well as designations of a physicist, an astronomer, a theologian and an author. He is considered to be key in the scientific revolution.



Born on 4th of January, 1643 and brought up in Woolsthorpe Manor House, England, had been the culminating figure in the 17th century. He lost his father at three, yet he had been a quirt mug. His mother remarried and he was left back to live with his maternal grandmother. From the age of 12 till he attained 17, he studied in The King's School, Grantham, where he learnt Greek and also imparted a significant foundation of mathematics. He was removed from his and he came back to Woolsthorpe by October 1659. His mother wanted to make him a farmer and he hated it. Henry Stokes, master at his previous and only school persuaded his mother to send him back to school. He was quite motivated by his desire for revenge against a schoolyard bully, and thus he became a top-ranked student, distinguishing himself from specifically by constructing sundials and models of windmills.

In the year 1661, he got admitted to Trinity University, Cambridge, on his uncle, Rev William Ayscough's recommendation, who had studied there. He kept working as a subsizar to make his ways until he got a scholarship in 1664, bearing a guarantee of four more years, till he gets his MA.

At that time, the studies were based on those of Aristotle, who, Newton supplemented with modern philosophers like Descartes and astronomers such as Galileo and Thomas Street, through whom he learned of Kepler's work. He set down in his notebook a series of "Quaestiones" about mechanical philosophy. In 1665, he discovered the generalised Binomial Theorem and began to develop a mathematical theory that got to be known as Calculus. Soon after Newton had completed his BA in August 1665, the university temporarily closed as a precaution against the Great Plague. Meanwhile, through his private studies, he developed his theories on calculus, optics and the law of gravitation.

In 1667, he returned to Cambridge and in October was elected as a fellow of Trinity. He got special permission from Charles II, he managed to avoid becoming ordained priest. Later, his studies impressed the Lucasian professor Isaac Barrow, who was more anxious to develop his own religious administrative potential; in 1669 Newton succeeded him, only one year after receiving his MA. He was elected a Fellow of the Royal Society in 1672.

By 1672, he had started to record his theological researches in notebooks which he showed to no one and which have only been recently been examined. They demonstrate an extensive knowledge of early Church writings and show that in the conflict between Athanasius and Arius, the loser, who rejected the conventional view of the Trinity.

THE APPLE INCIDENT: -

We all know about the famous and prevalent apple incident which led to the formulation and foundation of the Law of Gravitation.



Newton himself often narrated the story behind his inspiration to formulate the theory of gravitational force by merely observing the apple fall from the tree. Although it has been said that the apple story is a myth and Newton did not arrive at his conclusion about gravity in one moment, yet acquaintances do confirm the incident in fact, though the apocryphal verse that the apple actually hit his head.

It is known from Newton's notebooks that he was grappling in the late 1660s with the idea that terrestrial gravity extends, in an inverse-square proportion, to the moon. However, it took him two decades to develop the full-fledged story. The question was not whether gravity existed, but if it extended so far from earth that it could also be the force holding the Moon to its orbit. Newton showed that the force decreased as the inverse square of the distance, one could indeed calculate the Moon's orbital period, and get good agreement. He guessed the same force was responsible for other orbital motions and hence, named it as 'Universal Gravitation'.

From the three laws of motion to the basic principles of modern physics, Newton made pathbreaking achievements in the field of science as well as Mathematics. Some published pieces of Newton like *Philosophiae Naturalis Principia Mathematica* are quite important in the history of modern science.

Patience is all that leads to greater heights and its crystal clear from this quotation by Sir Isaac Newton,

"If I have done the public any service, it is due to my patient thought."

J.° Newton°

Credits:

Content: Afsana Yasmin

Source: internet

Designer: Nihar Basisth