

The life and times of sir isaac newton



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Isaac Newton is a widely known name, but most don't actually know anything about him. Newton had a very interesting life, and helped advance the theory of gravity. Without Newton and his strange life, our knowledge of gravity may not have been as advanced as it is today.

Even from his birth on January fourth in Woolsthorpe, England, Sir Isaac Newton had many hardships. His father died before he was born, and newborn Newton was not expected to survive his first day of life.(Westfall, 2018) Soon after his birth, his mother left to a new town with a new husband, forcing Newton to live with his grandparents. These early hardships caused him to have many different physiological problems and violent tendencies. When Newton's mother returned after her new husband died, they moved to a farm. Newton wasn't cut out for rural life, so his mother enrolled him into a school that would get him ready for Cambridge.

Newton enrolled into Cambridge to get a degree in law, but history tells us that's not what he came out with. From the get go, Newton stood out from his other classmates, being older due to his education being interrupted for significant period of time, as well as getting funding from the school. Even though he should have been grouped with lesser class due to this, his intelligence and individualism allowed him to fit in with the higher ups. Similar to others, when Newton began his higher education, he began studying Aristotle and Rene Descartes even though they were not part of the lesson plan. Using these two as role models, Newton's scientific career began. Even though the things he made here would go unpublished, they would help further his career, and allow him to grow in his scientific career.

When Cambridge closed due to disease, Newton made some of his most significant discoveries.(Weisstein, 2018) It was during this time that Newton produced the essay *Of Colours*, which talked about universal gravity and how it affected different objects in space, such as the moon, Earth, and sun. Soon after this, Newton was elected into a spot on a fellowship at the recently reopened school. When Isaac Barrow moved on from his spot in the fellowship, Newton took his place. After taking this new position of power, Newton rewrote his essay and made it into a novel titled *Opticks*.

Opticks expanded on the theories of universal gravity, while also talking about concepts of lights, rainbows, colors, prisms, and spectrums. He tested to see if all colors could be turned into mechanic images. Even with all the testing and such that Newton did, there is no evidence that these findings improved his image as a teacher. In 1675, Newton heard that somebody finally accepted his theories of colors, Hooke, and he decided to continue testing different thoughts and ideas that he had in his head dealing with how color and light works. After Newton published a new version of *Opticks*, Hooke claimed that Newton stole ideas from him. The problem was solved, but not without revealing the tension between the two men.

Between 1675 and 1679 Newton worked by himself to study the universal law of gravity, as well as lay down the groundwork for calculus. The major thing he tested at this time, was how the moon changed from Earth or the sun and if it actual did change at all. In 1679, Newton and Hooke went back to working together on the universal law of gravity, even though tension still remained. They went about doing this by testing different ways the universal law of gravity could work using either chemicals, electricity, or even light.

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Thanks to these studies, Newton was able to figure out how a multitude of different things worked in space such as falling debris and such.

Newton at this time began to develop calculus. Even though it was on accident, he still had the discovery made before a man by the name of Leibniz discovered independent calculus. This would later cause arguments between the two and their individual followers.

Even though Newton was a scientist, he still had faith in God, and was a strong Protestant. So when James II became king, it shook up Newton and his life at the university, since James II only wanted Roman Catholics in power. Newton believed that this drastic change was an attack on the University of Cambridge. (University of Saint Andrews, 2000) When the king began to attempt to give Catholics power they did not earn with a degree, Newton urged his peers to stay with the laws, and the king wouldn't be able to destroy what they had made of the school.

After this point, Newton's life was full of rewards as well as hardships. He was elected as Warden, the Master of the mint, a government job that made him very wealthy. He stayed at Cambridge, until he worked at the mint for 3 years. 2 years later, he was elected president of the Royal Society, being elected every year until his death. Along with these accomplishments, Newton was knighted by the queen at the time Anne. Newton was the first scientist to have this honor, as it had been seen as a anti-religious affair before. Even with all these accomplishment, it would only be natural for Newton to have some sort of hardship. This time it was over calculus. Newton and Leibniz, argued about who actually created calculus, causing them to

get into many debates and arguments. Often, Newton would get so angry, that his assistant would go and hide just in case he completely lost control.

In his last and final years, Newton republished works such as Opticks in latin, as well as new english versions and second editions. During his duties as president, due to his old age, from time to time he would sleep in the meetings, but they still continued to elect him. In the last few years, he lived with Catherine Conduitt , his niece, and her husband.

Sir Isaac Newton is a very famous scientist that has helped shape the world and how we perceive it today. Newton's work in figuring out how the universal law of gravity affects the planets and everything else in existence. Also his help in the creation of calculus, has advanced our knowledge of math, and how we can calculate different things in the universe. His ideas of light and colors changed how we saw the relationship between them and physical movement. Newton also proved it is able to be in the field of science and still believe in God, being a Protestant himself, and still sticking to it while many of his peers did not. Lastly, Newton's hardships allowed us to study the world as we do today, and even though Newton was very wealthy in his old age, we still must not forget the sacrifices he made and respect him for what he did to help advance science in the world then and even today.