

Research paper on isaac newton's impact on modern day society

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Isaac Newton also called the father of all science has vastly influenced the science world greatly. He came up with theories and advancements in science that have been used since then to solve problems of the modern day science. His discoveries and theories have had an effect on the fields of mathematics, mechanics, optics, astronomy, alchemy, experimental chemistry, and theology.

Mathematics

Newton at a time worked in Cambridge as a mathematics professor. It was when he was at Cambridge that he came up with calculus which was a new mathematics field. Newton came up with infinitesimal calculus to be exact with whom he had partially discovered with Leibniz. In this type of calculus, Newton had discovered other formulas which include the generalized binomial theorem that is effective for an exponent of any type, newton's method, newton's identities, classified cubic plane curves (polynomials of three to two degree variables), made an important contribution to finite differences theory, and became the first to practice fractional indices and engage coordinate geometry to get solutions to equations of the Diophantine nature. Furthermore, he was the first to apply power series, and used logarithms to approximate sums that are partial of the harmonic series. His formulas enabled him to calculate areas occupied by spaces along curved lines.

Newton's mathematical discoveries have far reaching uses in the world currently. They are being used in institutions as part of the curriculum and hence have served the education sector well. Students who are undertaking mathematical, physics and engineering courses have something to study

about. The formulas and theories have also been used in the computer, and mechanical sectors. Calculus is applied to computers when it comes to their making. In mechanics structures and machines are built based on these formulas and calculations. Moreover, he published a book Principia which scholars use until today.

Optics

Newton while in the university lectured about optics. At this time he investigated light refraction by showing that white light could be decomposed into colors of a wide spectrum and that it could be recomposed back again into white light from the multi-colored spectrum. This led to the development of the color theory that revolutionized the world of art social order forever. This led to the creation of color printing that was much cheaper than painting. Decorations that were colored could now be found. Color printing gave way to colored clothing industry. Men's buttons started being made from different colors as seen in the French revolution. Newton's discovery of colors and optics is also applied to modern day colored screens and computers. The computer and television creators use the color theory to produce screens that are colored.

Newton went ahead and proved that light is being dispersed. He went ahead and built a telescope from mirrors which were used as objective lenses. As a result he built the first, telescope that functioned and it is known as the Newtonian telescope. It was a refraction telescope. This telescope by newton opened the doors to the creation of other more advanced telescopes in the science world. Because of this creation of telescopes, this opened space to

the eyes of man. Man now began to explore space from earth. This resulted to the realization of the solar system that included the earth and eight other planets. Isaac newton's concept of optics also helped explain various phenomena. It explained the reason behind diffraction which has impacted widely on activities conducted by humans in water. It has helped fishers in the fishing industry improve by coming up with better ways of fishing. In quantum mechanics it is also applicable. This is where the idea of the photon comes in and the notion of wave-particle duality is involved. Also in biology concept of how the eye works is a result of newton's breakthrough in the field of optics.

Mechanics and gravitation

Newton is the one who discovered the law of gravity. He was sitting beneath an apple tree when an apple fell on his head. In law of gravitation it states that objects are pulled towards the earth because of a force that creates that pull from the earth's surface. He later came and related this to celestial mechanics which is the effects gravitation on the orbital nature of the planets. This explained why planets revolved around the sun and why natural satellites like the moon orbit the earth. This led to an advancement in the field of astrology. This led to human beings urge in to explore outer space which resulted to the making of space shuttles and man's landing on the moon. This led to technological advancements from then on.

The communication industry was also affected in a positive way due to newton's discovery of gravity. Communication satellites were sent to space and because of the knowledge of gravity scientist knew at what place they

would position them.

Newton's laws of motion also came up because of discovery of gravity. This led to the discovery of a centrifugal force that is being applied in the making of appliances like centrifuges which are used in experimental procedures. Most of the mechanical appliances even today base their functioning on this force.

Examples of mechanical and technological advancement that base on this concept are airplanes, cars, missiles, guns, rockets, and motorcycles.

Alchemy

Newton is also known for his contribution in the field of alchemy. He was said to be coming up with compound called the philosophers stone that could turn metal or other elements into gold. He also discovered of ways of separating ores from valuable metals. This led to advancement in the chemistry field. Therefore this also helped the mining industry advance, since the concept of separation is applied to the process. He also proved that minerals can grow. This advancements in chemistry created the base for which modern chemistry is practiced.

Theology

Isaac Newton considered God as a creator who is masterful and that his divine power cannot be opposed. His views on god are that comets and planets just cannot move in eccentric orbs and that planets cannot move in one and the same direction due to blind fate and that it has to be a greater force that makes them do so. Newton believed in god and his powers.

Newton also spent time trying to unhide the hidden messages in the bible. He had written religious tracts of quite a number which interpreted the bible. He also attempted to get information that is science based from the bible. Newton also talked on the end of times disregarding other prophets who were predicting when the world would end. He said the world would end when it would end and not until then.

In theology, newton tried to fuse science and religion together but with the aim of still maintaining religious concepts. He also helped clarify on the contentious issue regarding the ' heavens' as it was called by then. He helped differentiate heaven from space through his astronomical breakthroughs.

In conclusion Isaac Newton influenced a number of things in today's society from mathematics all the way to theology and religion this has helped change the way man views most of the things in the world today.

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