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## What Einstein Did.

Albert Einstein was born in cathedral city of Ulm, Germany in 1879. He was determined to solve problems of world by age of 12 only. He was poor at school and had left school at age of 15. Later, he rejoined studying and completed his degree in mathematics in 1900. In 1905, he published 4 extraordinary scientific papers and went on to become the great.

One of those paper provided the explanation of Brownian motion i.e. motion of small particles suspended in a liquid.

The 2<sup>nd</sup> paper solved the three-centuries-old dispute about the composition of light. He found that the light shows dual characteristics of waves as well as particles. Not only that but 2<sup>nd</sup> paper explained the reason behind photoelectric effect.



The 3rd paper was most important and revolutionary. It proposed "Special Theory of Relativity" in which he said if ~~time and~~ speed of light & laws of nature are considered constant then both time and motion are relative to observer.

This theory explained many things and so did its expansion in a paper of 1916 which was called "General Theory of Relativity". In this expansion, he said that gravitation is not a force but a ~~of~~ curved field in a space-time continuum which is created by presence of mass.

He became world famous in ~~1919~~ November, 1919 with the announcement of his precisely correct Theory. He was awarded with Nobel prize in 1921 for physics & became the most famous scientist in the world. He did not like the popularity as it got into the way of his work.



The 4th paper was an extension of previous paper in which it asked the question whether the inertial mass of a body depends on its energy content & answered in affirmative. Thus a famous formula " $E = mc^2$ " was formulated & accepted by world.

~~In 1912~~, This formula created a atomic bomb <sup>later</sup> which destroyed Hiroshima. When Adolf Hitler took over Germany in 1933, Einstein renounced German citizenship & fled to USA.

In 1939, he ~~found~~ heard that two German physicist had split the Uranium atom with a slight loss of total mass which was converted into energy. He realized the danger & wrote a letter to then president Franklin D. Roosevelt. He urged "Watchfulness and ~~a~~ or quick action". This led to the most expensive scientific project in US. In July 16, 1945, Atomic bomb was tested successful & was about to destroy Hiroshima in about 3 weeks on August 6th.



Einstein was both happy & heart-broken.  
Before he died in 1955, he ~~to~~ proposed  
that all natural laws can be expressed in  
one equation.

Since Newton, he was the only  
one who led mankind to understand more of  
overall structure of universe.

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