www.downloadmela.com - world's number one free essays website

Albert Einstein

Of all the scientists to emerge from the nineteenth and twentieth centuries there is one whose name is known by almost all living people. While most of these do not understand this man's work, everyone knows that its impact on the world of science is astonishing. Yes,many have heard of Albert Einstein's General Theory of relativity, but few know about the intriguing life that led this scientist to discover what some have called, "The greatest single achievement of human thought."

Einstein was born in Ulm, Germany on March 14, 1874. Before his first birthday, his family had moved to Munich where young Albert's father, Hermann Einstein, and uncle set up a small electro-chemical business. He was fortunate to have an excellent family with which he held a strong relationship. Albert's mother, Pauline Einstein, had an intense passion for music and literature, and it was she that first introduced her son to the violin in which he found much joy and relaxation. Also, he was very close with his younger sister, Maja, and they could often be found in the lakes that were scattered about the countryside near Munich.

As a child, Einstein's sense of curiosity had already begun to stir. A favorite toy of his was his father's compass, and he often marveled at his uncle's explanations of algebra. Although young Albert was intrigued by certain mysteries of science, he was considered a slow learner. His failure to become fluent in German until the age of nine even led some teachers to believe he was disabled.

Einstein's post-basic education began at the Luitpold Gymnasium when he was ten. It was here that he first encountered the German spirit through the school's strict disciplinary policy. His disapproval of this method of teaching led to his reputation as a rebel. It was probably these differences that caused Einstein to search for knowledge at home. He began not with science, but with religion. He avidly studied the Bible seeking truth, but this religious fervor soon died down when he discovered the intrigue of science and math. To him, these seemed much more realistic than ancient stories. With this new knowledge he disliked class even more, and was eventually expelled from Luitpold Gymnasium being considered a disruptive influence.

Feeling that he could no longer deal with the German mentality, Einstein moved to Switzerland where he continued his education. At sixteen he attempted to enroll at the Federal Institute of Technology but failed the entrance exam. This forced him to study locally for one year until he finally passed the school's evaluation. The Institute allowed Einstein to meet many other students that shared his curiosity, and It was here that his studies turned mainly to Physics. He quickly learned that while physicists had generally agreed on major principals in the past, there were modern scientists who were attempting to disprove outdated

www.downloadmela.com - world's number one free essays website

theories. Since most of Einstein's teachers ignored these new ideas, he was again forced to explore on his own. In 1900 he graduated from the Institute and then achieved citizenship to Switzerland.

Einstein became a clerk at the Swiss Patent Office in 1902. This job had little to do with physics, but he was able to satiate his curiosity by figuring out how new inventions worked. The most important part of Einstein's occupation was that it allowed him enough time to pursue his own line of research. As his ideas began to develop, he published them in specialist journals. Though he was still unknown to the scientific world, he began to attract a large circle of friends and admirers. A group of students that he tutored quickly transformed into a social club that shared a love of nature, music, and of course, science. In 1903 he married Mileva Meric, a mathematician friend.

In 1905, Einstein published five separate papers in a journal, the Annals of Physics. The first was immediately acknowledged, and the University of Zurich awarded Einstein an additional degree. The other papers helped to develop modern physics and earned him the reputation of an artist. Many scientists have said that Einstein's work contained an imaginative spirit that was seen in most poetry. His work at this time dealt with molecules, and how their motion affected temperature, but he is most well known for his Special Theory of Relativity which tackled motion and the speed of light. Perhaps the most important part of his discoveries was the equation: E= mc2.

After publishing these theories Einstein was promoted at his office. He remained at the Patents Office for another two years, but his name was becoming too big among the scientific community. In 1908, Einstein began teaching party time at the University of Berne, and the following year, at the age of thirty, he became employed full time by Zurich University. Einstein was now able to move to Prague with his wife and two sons, Hans Albert and Eduard. Finally, after being promoted to a professor, Einstein and his family were able to enjoy a good standard of living, but the job's main advantage was that it allowed Einstein to access an enormous library. It was here that he extended his theory and discussed it with the leading scientists of Europe. In 1912 he chose to accept a job placing him in high authority at the Federal Institute of Technology, where he had originally studied. It was not until 1914 that Einstein was tempted to return to Germany to become research director of the Kaiser Wilhelm Institute for Physics.

World War I had a strong effect on Einstein. While the rest of Germany supported the army, he felt the war was unnecessary, and disgusting. The new weapons of war which attempted to mass slaughter people caused him to devote much of his life toward creating peace. Toward the end of the war Einstein joined a political party that worked to end the war, and return peace to Europe. In 1916 this party was outlawed by the government, and Einstein was seen as a traitor.

www.downloadmela.com - world's number one free essays website

In that same year, Einstein published his General Theory of relativity, This result of ten years work revolutionized physics. It basically stated that the universe had to be thought of as curved, and told how light was affected by this. The next year, Einstein published another paper that added that the universe had no boundary, but actually twisted back on its self.

After the war, many aspects of Einstein's life changed. He divorced his wife, who had been living in Zurich with the children throughout the war, and married his cousin Elsa Lowenthal. This led to a renewed interest in his Jewish roots, and he became an active supporter of Zionism. Since anti-Semitism was growing in Germany, he quickly became the target of prejudice. There were many rumors about groups who were trying to kill Einstein, and he began to travel extensively. The biggest change, though, was in 1919 when scientist who studied an eclipse confirmed that his theories were correct.

In 1921, he traveled through Britain and the United States raising funds for Zionism and lecturing about his theories. He also visited the battle sites of the war, and urged that Europe renew scientific and cultural links. He promoted non-patriotic, non-competitive education, believing that it would prevent war from happening in the future. He also believed that socialism would help the world achieve peace.

Einstein received the Nobel Prize for Physics in 1922. He gave all the money to his ex-wife and children to help with their lives and education. After another lecture tour, he visited Palestine for the opening the Hebrew University in Jerusalem. He also talked about the possibilities that Palestine held for the Jewish people. Upon his return he began to enjoy a calmer life in which he returned to his original curiosity, religion.

While Einstein was visiting America in 1933 the Nazi party came to power in Germany. Again he was subject to anti-Semitic attacks, but this time his house was broken into, and he was publicly considered an enemy of the nation. It was obvious that he could not return to Germany, and for the second time he renounced his German citizenship. During these early years in America he did some research at Princeton, but did not accomplish much of significance.

In 1939 the second World War began to take form. There was heated argument during this time over whether the United States should explore the idea of an atomic bomb. Einstein wrote to President Roosevelt warning him of the disaster that could occur if the Nazi's developed it first. Einstein did not participate in the development of the bomb, but the idea did stem from his equation E=mc2. Just as he knew that the bomb was under development, he also knew when it was going to be used. Just before the bomb was dropped on Japan Einstein wrote a letter to the President begging him not to use this terrible weapon.

www.downloadmela.com - world's number one free essays website

The rest of Einstein's life was dedicated to promoting peace. After the war ended, he declared, "The war is won, but the peace is not." He wrote many articles and made many speeches calling for a world government. His fame, at this point, was legendary. People from all over would write to him for advice, and he would often answer them. He also continued his scientific research until the day he died. This was on April 18, 1955. There is no doubt that he was dissatisfied that he never was able to find the true meaning of existence that he strove for all his life.

Bibliography

Clark, Ronald W., Einstein - The Life and Times, New York: World Publishing, 1971.

Dank, Milton, Albert Einstein, New York: An Impact Biography, 1920.

Dukas, Helen and Banesh Hoffman, eds., Albert Einstein: The Human Side, Princeton: University Press, 1979.

Einstein, Albert, Carl Seelig, ed., Ideas and Opinions, New York: Bonanza Books, 1954.

"Einstein, Albert." Random House Encyclopedia, Random House Press, 1990 edition.

Hunter, Nigel, Einstein, New York: Bookwright Press, 1987.

Nourse, Dr. Alan E., Universe, Earth, and Atom: The Story of Physics, New York and Evanston: Harper & Row, Publishers, 1969.