

## Marie Sklodowska Curie

1867 - 1934

Awarded the Nobel Prizes for Physics in 1903 and for Chemistry in 1911

Marie Sklodowska Curie - the Polish born French physicist - was famous for her work on radioactivity. With Henri Becquerel and her husband, Pierre Curie, she was awarded the 1903, Nobel Prize for Physics for their investigation of radioactivity. Later, she was the sole winner of the 1911 Nobel Prize for Chemistry. **She was the only one to ever receive two Nobel Prizes.** 

Marie Sklodowska was born on November 7th, 1867, near the ancient centre of Warsaw. Her father, Wladyslaw Sklodowski, a very intellectual man, was a teacher of mathematics and physics. Marie was six years old when her father was forced out of his supplementary school post of under-inspector and had to give tuition to schoolboys. Her mother, Bronislawa Boguska, was a convent-educated woman and she was a headmistress of a private school for girls. She suffered from tuberculosis and died when Marie was only ten.

From an early age Marie had intense powers of concentration and a remarkable memory. At the age of 16 she won a gold medal on completion of her secondary education at the Russian lycée. **Marie began her independent life as a governess**. She had to divide her time during that first year between giving lessons and self education. In 1891 Marie went to Paris to follow lectures on physics in the Sorbonne. Her allowance from Poland was small and she virtually lived on bread and tea.

She was young and attractive when she met Pierre Curie in 1894. Pierre was a handsome and already famous physicist. Their marriage marked the start of a partnership that was soon to achieve results of world significance. They discovered *Polonium* in the summer of 1898 and *Radium* a few months later. The birth of her two daughters, Irène and Eve, in 1897 and 1904 did not interrupt Marie's intensive scientific work.

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They discovered radium in 1898

The phenomenon of radioactivity, discovered by Henri Becquerel in 1896, had attracted Marie Curie's attention and she devoted herself to study the new phenomenon. In June, 1903, Marie Curie received her Doctorate of Science for the study of radioactivity and in December of the following year she was appointed as chief assistant in the laboratory directed by Pierre Curie.

The English magazine 'Gentle Woman' described the Curies' way of life: they were loving comrades in their lifes' work in the laboratory as well as in their home life, which was no less charming because of their scientific achievement and distinction. The sudden death of Pierre Curie - he was knocked down by a horse-drawn cab - changed her life. She had to take on the whole role that she and her husband had once shared. Within a month of Pierre's death the Faculty of Science offered her an assistant professorship, the first woman to reach professorial rank in France, and within two years she was named titular professor.

Two families, Curies and Langevins were close friends. The mutual sympathy between Marie Curie and Paul Langevin, himself a famous physicist, eventually turned into love. The relationship between them would probably have continued but for another event, which brought Marie into public view. She was proposed for election to the prestigious Academie des Sciences. She was not elected, apparently because she was a woman.

Being a member of the Academy of Medicine from 1922, Marie devoted her researches to the study of radioactive substances and their medical applications. She initiated construction of the Radium Institute in Warsaw (Poland), opened in 1932, for cancer disease treatment by radium therapy. Marie Curie died in 1934 as a result of leukemia caused by the action of radiation. Her contribution to physics had been invaluable.