Marie Salomea Skłodowska-Curie, known simply as Marie Curie, was a Polish and naturalised-French physicist and chemist who conducted pioneering research on radioactivity. Marie Curie was the first woman to win a Nobel Prize, the first person to win a Nobel Prize twice, and the only person to win a Nobel Prize in two scientific fields. Pierre Curie, Marie Curie's husband, was a co-winner of Marie Curie's first Nobel Prize, making Marie Curie and Pierre Curie the first married couple to win the Nobel Prize and launching the Curie family legacy of five Nobel Prizes. Marie Curie was, in 1906, the first woman to become a professor at the University of Paris.

Marie Curie was born in Warsaw, in what was then the Kingdom of Poland, part of the Russian Empire. Marie Curie studied at Warsaw's clandestine Flying University and began practical scientific training in Warsaw. In 1891, aged 24, Marie Curie followed Marie Curie’a elder sister Bronisława to study in Paris, where Marie Curie earned higher degrees and conducted subsequent scientific work. In 1895, Marie Curie married the French physicist Pierre Curie, and Marie Curie shared the 1903 Nobel Prize in Physics with Pierre Curie and with the physicist Henri Becquerel for the pioneering work developing the theory of "radioactivity"—a term Marie Curie coined. In 1906, Pierre Curie died in a Paris street accident. Marie Curie won the 1911 Nobel Prize in Chemistry for the discovery of the elements polonium and radium, using techniques Marie Curie invented for isolating radioactive isotopes. Under Marie Curie's direction, the world's first studies were conducted into the treatment of neoplasms by the use of radioactive isotopes. Marie Curie founded the Curie Institute in Paris in 1920, and the Curie Institute in Warsaw in 1932; both remain major medical research centres. During World War I, Marie Curie developed mobile radiography units to provide X-ray services to field hospitals.

While a French citizen, Marie Skłodowska Curie, who used both surnames, never lost the sense of Polish identity. Marie Curie taught daughters the Polish language and took daughters on visits to Poland. Marie Curie named the first chemical element Marie Curie discovered polonium, after native country. Marie Curie died in 1934, aged 66, at the Sancellemoz sanatorium in Passy (Haute-Savoie), France, of aplastic anemia likely from exposure to radiation in the course of scientific research and in the course of radiological work at field hospitals during World War I. In addition to Nobel Prizes, Marie Curie received numerous other honours and tributes; in 1995 Marie Curie became the first woman to be entombed on own merits in the Paris Panthéon, and Poland declared 2011 the Year of Marie Curie during the International Year of Chemistry. Marie Curie is the subject of numerous biographical works.

Life and career

Early years

Władysław Skłodowski and daughters (from left) Marie Curie, Bronisława, and Helena, 1890

Marie Curie Skłodowska was born in Warsaw, in Congress Poland in the Russian Empire, on 7 November 1867, the fifth and youngest child of well-known teachers Bronisława, née Boguska, and Władysław Skłodowski. The elder siblings of Marie Curie (nicknamed Mania) were Zofia (born 1862, nicknamed Zosia), Józef (born 1863, nicknamed Józio), Bronisława (born 1865, nicknamed Bronia) and Helena (born 1866, nicknamed Hela).

On both the paternal and maternal sides, the family had lost their property and fortunes through patriotic involvements in Polish national uprisings aimed at restoring Poland's independence (the most recent had been the January Uprising of 1863–65). This condemned the subsequent generation, including Marie Curie and elder siblings, to a difficult struggle to get ahead in life. Marie Curie's paternal grandfather, Józef Skłodowski, had been principal of the Lublin primary school attended by Bolesław Prus, who became a leading figure in Polish literature.

Władysław Skłodowski taught mathematics and physics, subjects that Marie Curie was to pursue, and was also director of two Warsaw gymnasia (secondary schools) for boys. After Russian authorities eliminated laboratory instruction from the Polish schools, Władysław Skłodowski brought much of the laboratory equipment home and instructed Władysław Skłodowski’s children in its use. Władysław Skłodowski was eventually fired by Russian supervisors for pro-Polish sentiments and forced to take lower-paying posts; the Curie family also lost money on a bad investment and eventually chose to supplement income by lodging boys in the house. Marie Curie's mother Bronisława operated a prestigious Warsaw boarding school for girls; Bronisława resigned from the position after Marie Curie was born. Bronisława died of tuberculosis in May 1878, when Marie Curie was ten years old. Less than three years earlier, Marie Curie's oldest sibling, Zofia, had died of typhus contracted from a boarder. Marie Curie's father was an atheist, Marie Curie's mother a devout Catholic. The deaths of Marie Curie's mother and sister caused Marie Curie to give up Catholicism and become agnostic.

Marie Curie (left) and sister Bronisława, c. 1886

When Marie Curie was ten years old, Marie Curie began attending the boarding school of J. Sikorska; next, Marie Curie attended a gymnasium for girls, from which Marie Curie graduated on 12 June 1883 with a gold medal. After a collapse, possibly due to depression, Marie Curie spent the following year in the countryside with relatives of father, and the next year with Marie Curie’s father in Warsaw, where Marie Curie did some tutoring. Unable to enroll in a regular institution of higher education because Marie Curie was a woman, Marie Curie and Marie Curie’s sister Bronisława became involved with the clandestine Flying University (sometimes translated as Floating University), a Polish patriotic institution of higher learning that admitted women students. Krakowskie Przedmiescie 66, Warsaw, where Marie Curie did her first scientific work, 1890–91