

MARIE CURIE

(1) Some people call me the most famous female scientist in the world and the magazine *New Scientist* named me the “most inspirational woman in science” in 2009. Though I am embraced today as a scientific icon due to my ground-breaking research into radioactivity, this prestige is in stark contrast to the lack of encouragement women received when trying to pursue sciences when I was growing up. Nevertheless, I managed to discover two new radioactive elements, polonium and radium, and conducted pioneering research into radioactivity.

(2) I was born Maria Salomea Sklodowska in Warsaw, Poland on November 7th, 1867. There wasn't a lot of money growing up and I was one of six siblings. My father taught math and physics and encouraged all his children to study. Both my older sister, Bronia, and I developed a passion for science. My father would bring home laboratory equipment and showed us how to conduct experiments. At the age of 16, I graduated at the top of my class. Unfortunately, that's where my formal studies came to an end. At the time, there weren't any universities in Poland that would accept girls, even a girl who could beat all the boys at getting top marks. I couldn't stop learning so I began attending a secret underground university called the Floating University, which allowed girls to study. I supplemented my studies with my own book learning at night.

(3) My sister Bronia and I came to an agreement. Bronia wanted go to Paris to study medicine and I would help her financially by working as a governess. When it was my turn to leave Poland to study, Bronia would support me. It took a few years, but I finally made it to Paris in 1891. I was 24 years old and about to start my first studies at the University of Paris. In my classes, I was surrounded by 17 year old boys but I didn't care. Times were tough and in the winters I often got sick in my unheated apartment. I even fainted occasionally due to the lack of money for food. I studied hard and worked as a tutor in the evenings. I still barely supported myself, but in just three short years I had managed to earn two science degrees at the University of Paris. This was no small feat as I had to learn to speak and write in French very quickly to be successful in my studies.

(4) Shortly after getting my degrees, I met Pierre Curie who taught physics and chemistry. Our common passion for science drew us



Marie Curie
Chemist (1867-1934)

closer together and I found a partner in science, love and life. We married a year later in 1895. We had a secular ceremony and I wore a simple, but well made, dark blue dress, which I would later use as my laboratory outfit for many more years! My dream was always to go back to my beloved Poland, but they still would not accept women in their universities, so I was forced to stay in Paris to pursue a PhD.

(5) That same year, Wilhelm Roentgen discovered X-Rays and a short while later, Henri Becquerel reported discovering a penetrating ray that was emitted directly by uranium salts. My curiosity was sparked and I devoted my PhD research to these mysterious rays. Though my daughter Irène was born in 1897, this didn't prevent me from focusing on my exciting research. In fact, Pierre was so intrigued by my work that he abandoned his own research on crystals to join me in studying these rays. I would coin the term “radioactivity” for them, but we had no idea about their harmful effects. Both of us, especially myself, were bathed in ionizing radiation for years. I always had radioactive samples in test tubes in my desk and carried them around in my pockets. All of my research papers are now contained in a lead-lined box. Anyone wishing to see them must wear protective clothing as the papers, to this day, are still considered too contaminated with radiation to be handle without protection.

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(6) In 1898, Pierre and I discovered our first radioactive element. I wanted to name it polonium after my motherland. Later that year we also discovered another radioactive element we named radium. We even found that when exposed to radium, cancer cells were destroyed faster than healthy normal cells. This would later prove essential in developing radiation therapy for cancer.

(7) In 1903, Pierre, Henri Becquerel and I were awarded a Nobel Prize in Physics to recognize our work in radioactivity. Initially, the awards committee didn't want to recognize me. They had never given the Nobel Prize to a woman, but Pierre insisted that I be recognized. A year later I gave birth to our second daughter, Ève, but then tragedy struck in 1906 when Pierre was run over and killed by a horse-drawn

vehicle. I was devastated by the loss but I continued on with our research and was awarded a second Nobel Prize in 1911, this time in Chemistry. I was, and am, the only person to win the Nobel Prize in two different science disciplines. To add to my pride, my daughter, Irène, was awarded the Nobel Prize in Chemistry in 1935.

(8) In World War I, I joined the war effort. I knew that field surgeons would need X-Ray machines so I constructed over 200 mobile radiography devices that became known as *petites Curies* ("Little Curies") by the soldiers. These units treated over 1 million soldiers. In 1934, I died of aplastic anemia due to my extensive exposure to X-Rays during the war effort and my long-term exposure to radiation during my research.