

# MARIE CURIE



## Introduction

Marie Curie is a famous scientist who is best known for her discovery of two new **radioactive** elements, **polonium** and **radium**, as well as her pioneering work in the development of X-rays. During the First World War, Marie Curie played a vital part and it is estimated that her incredible invention helped over one million wounded soldiers. Marie was the first woman to win a Nobel Prize in physics. Furthermore, she is the only woman to win the award in two different fields.

## Early life

Marie Curie was born in Warsaw, Poland on the 7th November 1867. She was the youngest of 5 children and her parents were both teachers at local schools. Marie's dad was very interested in science and shared his passion with Marie when she was young.

## Education

As a child, Marie took after her father. She had a bright and curious mind and excelled at school. Despite being a top student, she was not allowed to continue her studies at the Male-only University in Warsaw because she was a woman. Marie moved to France in 1891 and immediately entered Sorbonne University in Paris where she studied physics and mathematics - she had naturally discovered a love of the subjects through her insatiable appetite for learning. She had very little money and survived on a diet consisting of bread, butter and tea. Marie met her husband, Pierre Curie, in Paris during this time and they were married in 1895.





## Marie Curie's work

Marie and Pierre, her husband, worked together investigating radioactivity. Their work involved working with an expensive mineral called **pitchblende**. Together they worked hard **grinding, dissolving, filtering, precipitating, collecting, redissolving, crystallising** and **recrystallising** this mineral - it was physically demanding work and involved dangers they did not know about at the time.

In July 1898, they announced the discovery of a new chemical element called **polonium**. At the end of the same year, they had discovered another new chemical element called **radium**. In 1903 they received their Nobel Prize for Physics. Despite her husband suddenly passing away, Marie continued with the work they had begun together and went on to receive her second Nobel Prize in 1911, for chemistry.

## Wartime

During the First World War, Marie put her knowledge and understanding of radiation to good use and with the help of her daughter, Irene, they worked to develop and instal small, mobile X-ray units that could be used to diagnose injuries near the battle fronts. These incredible machines were named 'Petites Curies' after the amazing lady who invented them.



## Legacy

Marie Curie's work is still incredibly well-known. In 2009, the New Scientist Magazine named her 'The Most Influential Woman in Science.' Some treatments being used in hospitals today started out as inventions in her laboratory. In recognition of the incredible work she carried out, the name 'Marie Curie' can be found in many different places. For example, the 'Pierre et Marie Curie' station in France opened up in honour of them and there is even an asteroid named the 7000 Curie!