

Timeline of Marie Sklodowska Curie

1867 Born in Warsaw, Poland.

1893-94 Earned math and physics degrees at the Sorbonne in Paris. Started writing a **doctoral thesis on radiation**. It had been discovered in 1896 by Antoine Henri Becquerel.

1895 Married physicist Pierre Curie, head of the laboratory at the School of Industrial Physics and Chemistry in Paris. Joined him in his work there.

1896-1903 Measured radiation levels emitted by various compounds. Discovered two substances that emitted more radiation than would be expected. In 1898, concluded that one of them contained an unknown radioactive element. Pierre Curie joined his wife in

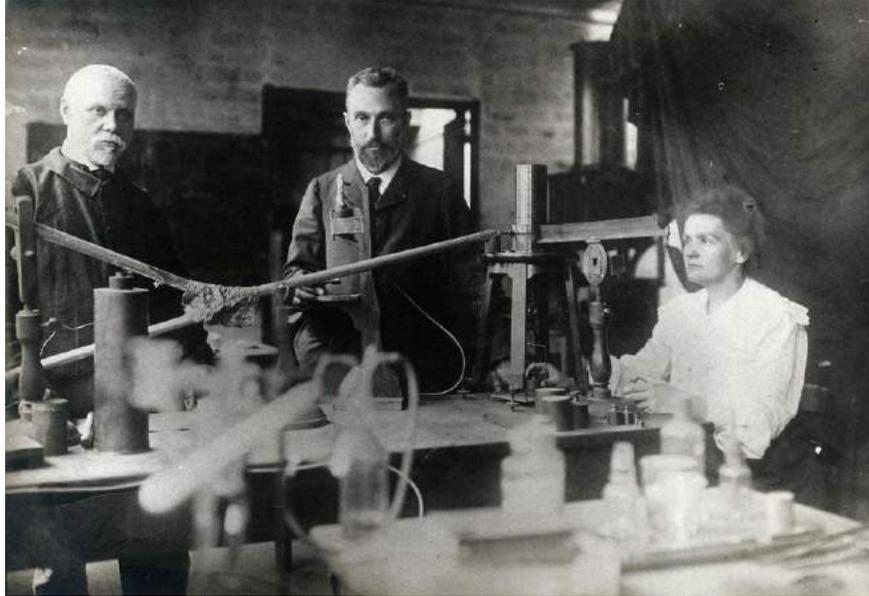
conducting research. Together, the pair discovered two new radioactive elements. They named the elements *polonium* (after Poland) and *radium*. Their work then focused on identify their chemical properties.

1897 Gave birth to her first daughter, Irene.

1903 Earned her doctorate, based on the work described in her thesis, *Radio-Active Substances*. With her husband and Becquerel, was awarded the Nobel Prize in Physics.

1904 Gave birth to her second daughter, Eve. Pierre Curie named a professor at the Sorbonne.





Marie and Pierre Curie (center) in their laboratory

1906 After her husband was killed by a truck on a Paris street, assumed his position at the Sorbonne. Became the first female lecturer in the 750-year history of the university. Also assumed charge of the Sorbonne lab.

1908 Promoted to Professor at the Sorbonne.

1911 Awarded a second Nobel Prize for Chemistry, for isolating pure radium.



1914-1918 During World War I, developed X-rays for use in medicine.

1918-1934 Became director of the scientific department of the Radium Institute. Joined by her daughter Irene Joliot-Curie and husband Frederic Joliot. Continued to research the chemistry of radioactive materials and their medical applications. Lectured internationally. Established scholarships for scientists.

1934 Died of **leukemia**, likely due to prolonged exposure to radiation during her lifetime.

1935 Daughter Irene Joliot-Curie and Frederic Joliot received the Nobel Prize in Chemistry.

Joliot-Curie's daughter became a nuclear physicist and their son a biochemist, both making significant scientific contributions. Their grandson is an astrophysicist.

Radio-Active Substances

Thesis presented to the Faculte des Sciences de Paris, 1903

by Mme. Marie Sklodowska Curie

Conclusion (edited)

- (1) I will define, in conclusion, the part I have personally taken in the research on radioactivity.
- (2) I have investigated the radioactivity of **uranium compounds**. I have examined other bodies for the existence of **radioactivity**. I found the property to be possessed by thorium compounds. I have described the radioactivity of the compounds of uranium and thorium.
- (3) I have conducted a research upon radioactive substances other than uranium and thorium. I used accurate electrometric methods. I discovered that the mineral uraninite possesses radioactivity unrelated to their content of uranium and thorium.
- (4) From this I concluded that these minerals must contain a different and stronger radioactivity.
- (5) With M. Curie and others, I extracted from uraninite two strongly radioactive bodies, polonium and radium.
- (6) I have chemically examined these substances. I conducted experiments and succeeded in isolating pure radium chloride. Then I could identify the atomic weight of radium with a very fair degree of accuracy. The work has proved that radium is a new chemical element. It has justified our new method of investigating new chemical elements, based upon radioactivity ...
- (7) With M. Curie, I have examined different effects produced by the new radioactive substances. We have shown that radium gives rise to rays charged with negative electricity. Our research has given rise to a scientific movement. It will be the starting-point of much research and investigation.