Marie Curie made an agreement with sister, Bronisława, that Marie Curie would give financial assistance during Bronisława's medical studies in Paris, in exchange for similar assistance two years later. In connection with this, Marie Curie took a position first as a home tutor in Warsaw, then for two years as a governess in Szczuki with a landed family, the Żorawskis, who were relatives of Marie Curie's father. While working for the latter family, Marie Curie fell in love with Żorawskis’ son, Kazimierz Żorawski, a future eminent mathematician.

Kazimierz's parents rejected the idea of him marrying the penniless relative, and Kazimierz was unable to oppose their decision. Marie Curie's loss of the relationship with Żorawski was tragic for both parties. Kazimierz soon earned a doctorate and pursued an academic career as a mathematician, becoming a professor and rector of Kraków University. As an old man and mathematics professor at the Warsaw Polytechnic, Kazimierz would sit contemplatively before the statue of Marie Curie Skłodowska that had been erected in 1935 before the Radium Institute, which Marie Curie had founded in 1932.

At the beginning of 1890, Bronisława—who a few months earlier had married Kazimierz Dłuski, a Polish physician and social and political activist—invited Marie Curie Skłodowska to join them in Paris. Marie Curie declined because Marie Curie could not afford the university tuition; it would take Marie Curie a year and a half longer to gather the necessary funds. Marie Curie was helped by her father, who was able to secure a more lucrative position again. All that time Marie Curie Skłodowska continued to educate herself, reading books, exchanging letters, and being tutored herself. In early 1889 Marie Curie returned home to Marie Curie’s father in Warsaw. Marie Curie continued working as a governess and remained there until late 1891. Marie Curie Skłodowska tutored, studied at the Flying University, and began her practical scientific training (1890–91) in a chemistry laboratory at the Museum of Industry and Agriculture at Krakowskie Przedmieście 66, near Warsaw's Old Town. The laboratory was run by Marie Curie’s cousin Józef Boguski, who had been an assistant in Saint Petersburg to the Russian chemist Dmitri Mendeleyev.

Life in Paris

In late 1891, Marie Curie left Poland for France. In Paris, Marie Curie briefly found shelter with Marie Curie’s sister and brother-in-law before renting a garret closer to the university, in the Latin Quarter, and proceeding with Marie Curie’s studies of physics, chemistry, and mathematics at the University of Paris, where Marie Curie enrolled in late 1891. Marie Curie subsisted on her meagre resources, keeping herself warm during cold winters by wearing all the clothes she had. Marie Curie focused so hard on Marie’s studies that Marie Curie sometimes forgot to eat. Marie Curie studied during the day and tutored evenings, barely earning Marie Curie’s keep. In 1893, Marie Curie was awarded a degree in physics and began work in an industrial laboratory of Gabriel Lippmann. Meanwhile, Marie Curie continued studying at the University of Paris and with the aid of a fellowship Marie Curie was able to earn a second degree in 1894.

Marie Curie had begun Marie Curie’s scientific career in Paris with an investigation of the magnetic properties of various steels, commissioned by the Society for the Encouragement of National Industry. That same year, Pierre Curie entered Marie Curie’s life: it was Pierre Curie and Marie Curie’s mutual interest in natural sciences that drew them together. Pierre Curie was an instructor at The City of Paris Industrial Physics and Chemistry Higher Educational Institution (ESPCI Paris). Pierre Curie and Marie Curie were introduced by Polish physicist Józef Wierusz-Kowalski, who had learned that Marie Curie was looking for a larger laboratory space, something that Wierusz-Kowalski thought Pierre could access. Though Pierre Curie did not have a large laboratory, Pierre Curie was able to find some space for Marie Curie where Marie Curie was able to begin work.

Pierre Curie and Marie Skłodowska-Curie, 1895

Pierre Curie and Marie Curie’s mutual passion for science brought Pierre Curie and Marie Curie increasingly closer, and Pierre Curie and Marie Curie began to develop feelings for one another. Eventually, Pierre Curie proposed marriage, but at first Marie Curie did not accept as Marie Curie was still planning to go back to Marie Curie’s native country. Pierre Curie, however, declared that Pierre Curie was ready to move with Marie Curie to Poland, even if it meant being reduced to teaching French. Meanwhile, for the 1894 summer break, Marie Curie returned to Warsaw, where Marie Curie visited Marie Curie’s family. Marie Curie was still labouring under the illusion that Marie Curie would be able to work in Marie Curie’s chosen field in Poland, but Marie Curie was denied a place at Kraków University because of sexism in academia. A letter from Pierre Curie convinced Marie Curie to return to Paris to pursue a PhD. At Marie's insistence, Pierre Curie had written up his research on magnetism and received Pierre Curie’s doctorate in March 1895; Pierre Curie was also promoted to professor at the School. A contemporary quip would call Marie "Pierre Curie's biggest discovery".

On 26 July 1895, Pierre Curie and Marie Curie were married in Sceaux; neither wanted a religious service. Marie Curie's dark blue outfit, worn instead of a bridal gown, would serve Marie Curie for many years as a laboratory outfit. shared two pastimes: long bicycle trips and journeys abroad, which brought Pierre Curie and Marie even closer. In Pierre Curie, Marie Curie had found a new love, a partner, and a scientific collaborator on whom Marie Curie could depend.

New elements

Pierre and Marie Curie in the laboratory, c. 1904

In 1895, Wilhelm Röntgen discovered the existence of X-rays, though the mechanism behind their production was not yet understood. In 1896, Henri Becquerel discovered that uranium salts emitted rays that resembled X-rays in their penetrating power.