Marie Skłodowska, as she was called before marriage, was born in Warsaw in 1867. Both her parents were teachers who believed deeply in the importance of education. Marie had her first lessons in physics and chemistry from her father. She had a brilliant aptitude for study and a great thirst for knowledge; however, advanced study was not possible for women in Poland. Marie dreamed of being able to study at the Sorbonne in Paris, but this was beyond the means of her family. To solve the problem, Marie and her elder sister, Bronya, came to an arrangement: Marie would go to work as a governess and help her sister with the money she managed to save so that Bronya could study medicine at the Sorbonne. When Bronya had taken her degree she, in her turn, would contribute to the cost of Marie’s Studies.

So it was not until she was 24 that Marie came to Paris to study mathematics and physics. Bronya was now married to a doctor of Polish origin, and it was at Bronya’s urgent invitation to come and live with them that Marie took the step of leaving for Paris. By then she had been away from her studies for six years, nor had she had any training in understanding rapidly spoken French. But her keen interest in studying and her joy at being at the Sorbonne with all its opportunities helped her surmount all difficulties. After three years she had brilliantly passed examinations in physics and mathematics. Her goal was to take a teacher’s diploma and then to return to Poland.

Now, however, there occurred an event that was to be of decisive importance in her life. She met Pierre Curie. He was 35, eight years older than her, and an internationally known physicist.

They were given money as a wedding present which they used to buy a bicycle for each of them, and long, sometimes adventurous, cycle rides became their way of relaxing. Their life was otherwise quietly monotonous, a life filled with work and study.

Marie Curie Joins the War Effort

1 January, 1915: Nobel laureate, Marie Curie, is using her expertise in science to aid the war efforts in France. With funds from the Union of Women of France, she has converted cars into mobile radiological units. These units, containing portable Roentgen X-ray apparatus and their own dynamo, travel from post to post and are used to help pinpoint the location of shell fragments and bullets in wounds. Due to the efforts of Madame Curie, university laboratories and benefactors have contributed the materials and 150 young women have been selected and trained by her to operate these units. These mobile cars, known as “little curies”, and her personal unit, a Renault, are omnipresent on the battlefields.

Throughout World War I, Maria Curie, with the help of her daughter Irene, devoted herself to the development of the use of X-radiography. In 1918 the Radium Institute, the staff of which Irene had joined, began to operate in earnest, and it was to become a universal center for nuclear physics and chemistry. Maria Curie, now at the highest point of her fame, and from 1922, a member of the Academy of Medicine, devoted her researches to the study of the chemistry of radioactive substance and the medical applications of these substances.
Perhaps the most famous of all women scientists, Maria Sklodowska-Curie is notable for her many firsts:

- She was the first to use the term radioactivity for this phenomenon.
- She was the first woman in Europe to receive her doctorate of science.
- In 1903, she became the first woman to win a Nobel Prize for Physics. The award, jointly awarded to Curie, her husband Pierre, and Henri Becquerel, was for the discovery of radioactivity.
- She was also the first female lecturer, professor and head of Laboratory at the Sorbonne University in Paris (1906).
- In 1911, she won an unprecedented second Nobel Prize (this time in chemistry) for her discovery and isolation of pure radium and radium components. She was the first person ever to receive two Nobel Prizes.
- She was the first mother-Nobel Prize Laureate of daughter-Nobel Prize Laureate. Her oldest daughter Irene Joliot-Curie also won a Nobel Prize for Chemistry (1935).
- She received 15 gold medals, 19 degrees, and other honors.
- She is the first woman who has been laid to rest under the famous dome of the Pantheon in Paris for her own merits.
Visit to America

In 1921, accompanied by her two daughters, Maria Curie made a triumphant journey to the United States, where President Warren G. Harding presented her with a gram of radium bought as the result of a collection among American women. She gave lectures, especially in Belgium, Brazil, Spain, and Czechoslovakia. She was a member of the International Commission on Intellectual Co-operation by the Council of the League of Nations. In addition, she had the satisfaction of seeing the Curie Foundation in Paris develop and the inauguration in 1932 in Warsaw of the Radium Institute, of which her sister Bronia became director.

New York City arrival of the Curie party, May 12, 1921. Marie Curie (holding hat) is flanked by daughters Eve (on her left) and Irene (on her right). Mrs. William Brown Meloney is at far left. (Image courtesy of the Library of Congress.)

Marie Curie Receives Gift from Women of America

20 May, 1921: Through the efforts of the American journalist, Mrs. William Brown Meloney, the women of America have honored Madame Marie Curie with a gift of one gram of radium. In a specially planned White House ceremony, President Warren G. Harding welcomed Madame Curie and her daughters, Irene and Eve, presenting Marie with the gold key to the case holding the radium. Her sacrifice and tireless efforts throughout the war prompted the women of America to grant the fulfillment of her fondest wish. During her stay in the United States, Madame Curie will also visit prominent academic institutes including Yale, the University of Chicago, Northwestern University, Columbia University and others to receive honorary Doctor of Science degrees, their own acknowledgement of her contributions to science.

Marie Curie at the Canonsburg Plant of the Standard Chemical Company, Pittsburgh, Pa., 1921. (Image courtesy of the Library of Congress.)

“As a nation whose womanhood has been exalted to fullest participation in citizenship, we are proud to honor in you a woman whose work has earned universal acclaim and attested woman’s equality in every intellectual and spiritual activity ... ... We greet you as foremost among scientists in the age of science.”

- Warren G. Harding, President

Resources:
Maria Skłodowska-Curie online available at:
http://www.energy.ca.gov/education/scientists/curie.html

Museum of Marie Curie Sorbonne University - Paris

Prepared by:
Ewa Kuligowska, MD