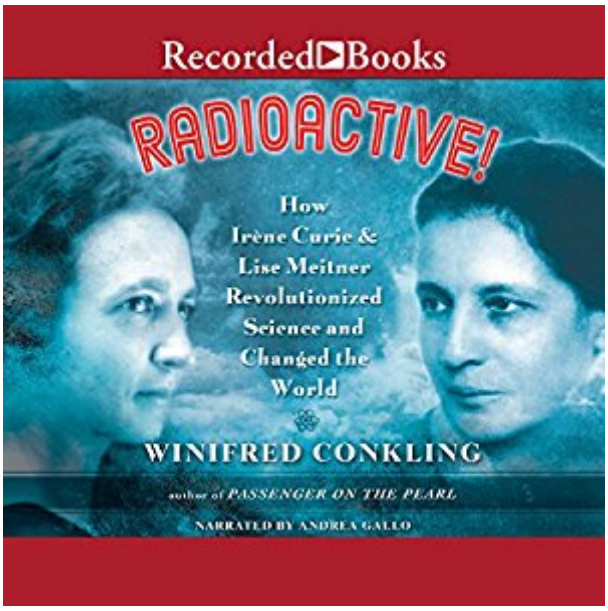
Radioactive!: How Irene Curie And Lise Meitner Revolutionized Science And Changed The World



Synopsis

The fascinating, little-known story of how two brilliant female physicists' groundbreaking discoveries led to the creation of the atomic bomb. In 1934, Irene Curie, working with her husband and fellow scientist, Frederic Joliot, made a discovery that would change the world: artificial radioactivity. This breakthrough allowed scientists to modify elements and create new ones by altering the structure of atoms. Curie shared a Nobel Prize with her husband for their work. But when she was nominated to the French Academy of Sciences, the academy denied her admission and voted to disqualify all women from membership. Four years later, Curie's breakthrough led physicist Lise Meitner to a brilliant leap of understanding that unlocked the secret of nuclear fission. Meitner's unique insight was critical to the revolution in science that led to nuclear energy and the race to build the atom bomb, yet her achievement was left unrecognized by the Nobel committee in favor of that of her male colleague. Radioactive! presents the story of two women breaking ground in a male-dominated field, scientists still largely unknown despite their crucial contributions to cutting-edge research, in a nonfiction narrative that reads with the suspense of a thriller.

Book Information

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Customer Reviews

Good read for 7-10 grade research, or just for fun if you love history and science.

These were gifts to teacher to share with the young women concerning their field of study

This is an excellent book for young people who have no idea of the development of nuclear energy.

RADIOACTIVE! How IrÃ¨ne Curie And Lise Meitner Revolutionized Science And Changed The World by Winifred Conkling tells of two little known scientists and their journey to success through the experimentation of radium and other various substances.While I usually find nonfiction books bland and have trouble concentrating, I did not experience that with RADIOACTIVE! at all --- it was dynamic and a pleasure to read. RADIOACTIVE! Will keep readers gripped by not only informing them about the scientific aspects of IrÃ¨ne Curie and Lise Meitner's life, but also the personal side. While reading, I learned so many new things about these two female scientists that I didn't know before, such as MeitnerÃ¢Â Â™s discovery of the nuclear fission. I found that the book almost read like a fiction novel, which was perfect for keeping me gripped on to the story.I think itÃ¢Â Â™s important that that the subject material in YA nonfiction books can be understood by readers aged 12 and above, and RADIOACTIVE! achieves that. As you would expect from a novel about two scientists that worked on radioactivity, there are some pretty hefty science facts that might not be easily understood at first glance. Conkling really makes sure you understand the subject matter, though, by including illustrations to ease you in. I found these extremely useful during my reading and appreciated the helping hand.I did notice, however, that Conkling talked about the two physicists separately rather than intertwining their stories. It didn't throw off the groove of the book, by any means, but I think their stories would have been improved if they were woven together.There's no doubt that RADIOACTIVE! isn't for everyone, but if you like empowering reads about women or enjoy learning about science and the politics of it, pick up this book and give it a whirl. Chances are, you'll like it.Reviewed by Linnea P.

Radioactive! Is the history of two women and the roles that they played in the development of nuclear physics in the first half of the twentieth century.Irene Curie, the daughter of Marie Curie, with her husband Frederic Joliot, discovered artificial radioactivity. For example, by bombarding stable aluminum with alpha particles, helium nuclei, they were able to transform the aluminum into radioactive phosphorous. Today, such transformations, the transmutation of elements sought by alchemists, are done routinely. Years ago, I worked with a group at CERN that could turn elemental lead into gold. Irene Curie and her husband were the first to discover the effect for which they received the Nobel Prize. Yet, despite her accomplishments, Irene Curie was denied admission to the French Academy of Science. She did become director of her motherÃ¢Â Â™s Radium Institute.Lise Meitner discovered and correctly interpreted nuclear fission. She designed a set of experiments, but was forced to flee Germany because of her Jewish ancestry. Her German

colleague carried out the experiments, but it was Lise Meitner who, in discussions with her nephew Otto Frisch, interpreted the experimental results as nuclear fission and explained them in terms of the mass-energy balance. A Nobel Prize was given to her co-worker who seemed to be satisfied to work for the Nazis and to take credit for Meitner's discovery. However, Meitnerium, element 109 was named for her.The book is well written, containing many photographs. I especially liked the one of Irene Curie hiking in the Alps with an ice axe in hand. The nuclear physics serves as a theme, but it is the lives of the women that are at the center of the story.Conclusions are not hard to come by. If you a woman, it helps to be ten times smarter than the men if you want to succeed or even get a foot in the door in the sciences. Irene Curie did have a famous and successful family to help her. Lise Meitner was lucky to get a job as an assistant. Both women did get recognition. but were not accepted as full members of the boys club. Meitner was lucky that she had friends who helped her to escape from Germany. Have things changed in the last 80 years? That question can be debated. However, these two women have set a good example that others can follow.