## Women & Science

Individual exercises
Group discussion
Variable length

Four women who advanced scientific knowledge and made amazing discoveries.

Mary Seacole was a Scottish-Jamaican healer and businesswoman, and possibly the first practitioner-nurse. She volunteered her medical services during the Crimean War, but was rejected. In response she set up the British Hotel behind military lines, using holistic healing practices including rest, diet, and hygiene. The fact that she was on the front lines meant that she could visit the battlefield herself in order to reach the wounded. After the Crimean War ended she was left destitute until former patients held a fund-raising gala.

Discuss in pairs or small groups: When someone has a new idea, how easy or difficult is it for them to persuade others?

Writing exercise: You are a former patient of Mary Seacole, and you discover that other people do not know of her great achievements. Write a letter to the newspapers about her life and her work.



## Marie Salomea Skłodowska–Curie

1867-1934



Marie Curie was a Polish-French physicist and chemist who conducted pioneering research into radioactivity. She was born in Poland at a time when it was still part of the Russian Empire, and lived most of her life in France.

She was the first woman to win a Nobel Prize, as well as the first person to win a Nobel Prize twice. She is the only person to have won a Nobel Prize in two different sciences: physics in 1903 and chemistry in 1911. Working with her husband and another colleague, she was a pioneer of the theory of radioactivity. She invented her own techniques for isolating radioactive isotopes, and discovered the elements polonium and radium.

Discuss in pairs or small groups: If you were to spend many years researching a specific area of science, what would it be? Why?

Writing exercise: Imagine that you could send a letter backwards in time to Marie Curie. Write to her about a key scientific advancement of the last 50 years. Explain it in as much detail as possible.



Hypatia of Alexandria Approximately 350-415 Hypatia was a philosopher, mathematician, and astronomer from Alexandria in Egpyt. She was preceded by other female mathematicians, but is the first whose life is well recorded. She had great influence over the political elite of Alexandria, which included groups of different religions, and her counsel was often sought. She provided advice to the Roman prefect, Orestes, about his political feud with the Bishop. Tragically, her political wisdom and dipolmacy drew thte attention of people who believed that she shouldn't be involved, and Hypatia was murdered. Hypatia's death shocked the Roman Empire. She has become as a symbol of learning and women's rights.

Discuss in pairs or small groups: Hypatia was deeply involved in political activities at a national and international level — even though it was a threat to her life. How important is it to try to help others or your country? How do you balance this with your own personal safety?

Writing exercise: Create a timetable for Hypatia. It should cover one week, and should include her political work, scientific study, and teaching. What else do you think she does? Use your imagination to create other entries such a social life or daily food and exercise.

Ada Lovelace was a brilliant English mathematician and writer. She was the daughter of poet Lord Byron and mathematician Baroness Wentworth, as well as becoming the Countess of Lovelace when she married. She worked with Charles Babbage on the famous Analytical Engine, and she was the first to recognise that the machine had capabilities beyond pure calculation, and the first to publish such a calculation. Her work led to computing, and the computer language Ada was named after her. She has been extensively portrayed in literature, film, and television.

Discuss in pairs or small groups: The ideas of Ada Lovelace led to inventions more than 100 years later. Which of today's ideas do you think will become the inventions of the future?

Writing exercise: How many different things in your house contain computer chips? Think of two things and compare how they work and what they are used for — how are they similar and how are they different?

Ada Lovelace (Augusta
Ada King, Countess of
Lovelace)
1815-1852



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