



Living Well
North Tyneside
Supporting Health and Wellbeing

Celebrating the Hidden Pioneers of Innovation

Science, technology, engineering, and mathematics (STEM) have long been shaped by the contributions of women—yet many of their achievements remain overlooked, forgotten, or misattributed to men. **The International Day of Women and Girls in Science, on 11th February**, is an opportunity to recognise the incredible impact women have had in advancing knowledge and innovation, often against the odds of gender bias and societal barriers.

This year, let's highlight remarkable British women whose inventions and discoveries changed the world—but who rarely get the credit they deserve.

Groundbreaking Inventions by Women – That History Almost Forgot

1. The Computer Algorithm – Ada Lovelace (1815–1852)

When people think of computing pioneers, names like Alan Turing or Charles Babbage often come to mind. However, the first-ever computer algorithm was created by a British woman, Ada Lovelace.

Lovelace worked with Charles Babbage on his design for the Analytical Engine, an early mechanical computer. She realised that it could go beyond basic calculations and wrote what is now considered the first algorithm intended for a machine, making her the world's first computer programmer. Without her, modern computing may have taken a completely different path.

2. The Life-Saving Syringe – Letitia Geer (1852–1935)

Many assume that disposable syringes were a 20th-century male invention, but the first practical one-handed medical syringe was designed by Letitia Geer, a British-born nurse and innovator.

Before her invention in 1899, syringes required two hands to operate, making medical treatments cumbersome and inefficient. Her design allowed doctors and nurses to administer injections single-handedly, paving the way for modern medical syringes used in hospitals worldwide today.

This small but revolutionary invention transformed medical care forever.

3. The Discovery of Pulsars – Dame Jocelyn Bell Burnell (Born 1943)

One of the most significant astronomical discoveries of the 20th century was made by a British woman—but the Nobel Prize for it went to her male supervisor.

In 1967, Jocelyn Bell Burnell, then a PhD student at the University of Cambridge, discovered pulsars, highly magnetised rotating neutron stars that emit beams of electromagnetic radiation. These objects have helped scientists understand space, black holes, and gravitational waves.

However, when the discovery was recognised with a Nobel Prize in Physics in 1974, the award went to her male supervisor, Antony Hewish, while Bell Burnell was ignored.

She has since been widely recognised for her work, but her story remains a stark reminder of gender bias in science.

4. The Secret of DNA's Structure – Rosalind Franklin (1920–1958)

The double-helix structure of DNA is one of the greatest scientific discoveries of all time, but few people know that it was a British woman, Rosalind Franklin, who provided the crucial evidence for it.

Working at King's College London in the 1950s, Franklin used X-ray crystallography to capture the first clear image of DNA's structure. Her famous "Photo 51" was used by James Watson and Francis Crick without her permission, and they went on to publish their findings—winning the Nobel Prize in 1962.

Franklin's contribution was barely acknowledged at the time, and she passed away before she could receive the recognition she deserved.

Today, she is finally credited as one of the key figures in the discovery of DNA.

5. Wireless Transmission – Hedy Lamarr (1914–2000)

Although Austrian-American, Hedy Lamarr's contribution to modern technology deserves a mention. Known as a Hollywood actress, she was also a brilliant inventor who developed frequency-hopping technology—a breakthrough that led to Wi-Fi, Bluetooth, and GPS.

Despite her revolutionary work during World War II, she was dismissed as just a glamorous celebrity, and men later took credit for her ideas.

Without her, our modern wireless world would not exist.

Why Do Women's Contributions Get Forgotten?

Despite their groundbreaking work, many women in science have faced:

Lack of recognition – Their discoveries were credited to male colleagues.

Limited access to education – Women were historically excluded from universities and research institutions.

Gender bias – Even today, fewer women are recognised in STEM fields compared to men.

This is why days like International Day of Women and Girls in Science are crucial. By recognising these pioneers, we inspire future generations of female scientists, inventors, and engineers.

How Can We Support Women and Girls in Science Today?

- **Encourage STEM education for girls** – More young women should be supported in studying science, maths, and technology subjects.
- **Highlight female scientists** – Schools, universities, and media should showcase women's achievements in STEM.
- **Promote gender equality in the workplace** – More women should be in leadership roles in science and tech industries.
- **Challenge the narrative** – If someone assumes a famous invention was made by a man, correct them and share the real history.

Many organisations in the UK are dedicated to supporting women in STEM, such as:

Women in Science and Engineering (WISE)

STEM Women

The Royal Society's Women in STEM Initiative

Final Thoughts

Women have always been at the forefront of scientific discovery, yet their contributions have often been ignored, downplayed, or stolen. International Day of Women and Girls in Science is a chance to change that narrative.

By recognising the achievements of women in STEM, we not only honour the past but also inspire future generations to break barriers, challenge stereotypes, and continue shaping the world through science and innovation.

Let's celebrate the incredible women who have changed history—whether they got the credit or not.

Related Links

- [International Day of Women and Girls in Science, 11 February](#)
- [Women in Science and Engineering \(WISE\)](#)
- [STEM Women](#)
- [The Royal Society's Women in STEM Initiative](#)

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