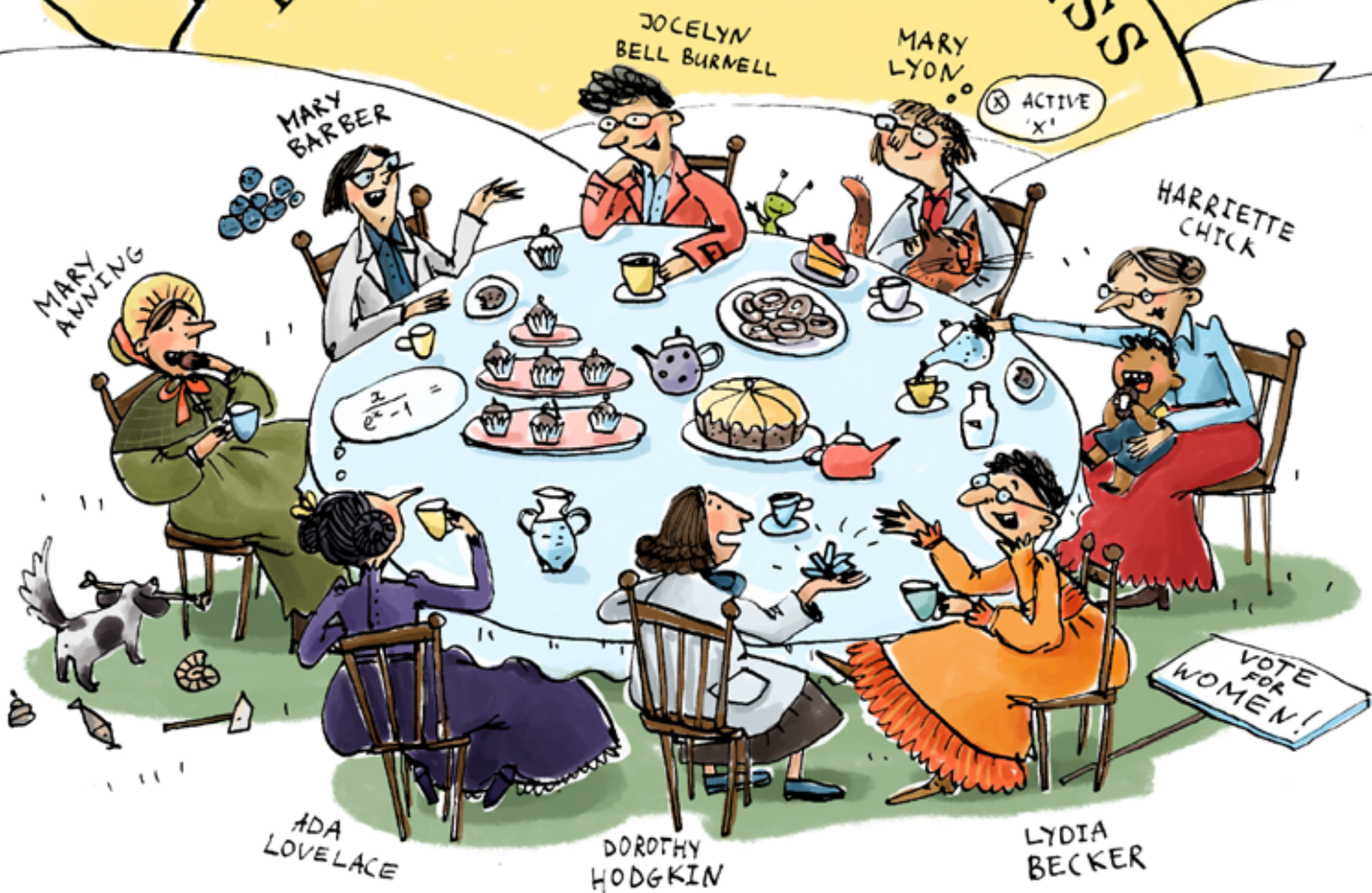


PIONEERS OF PROGRESS





1908

WHAT DO
THEY WANT NEXT?
HALF OF THE
WORLD?



Stories and research: Kirstin von Glasow
Illustrators: Elina Ellis and Lindsay McBirnie

Pioneers of Progress

Pioneers of Progress tells the tales of eight women whose contributions to scientific discovery had huge impacts on the world we live in. Their work and the scientific legacies they left behind has often gone unrecognised.

These women were pioneers in the truest sense of the word, not only because of their scientific breakthroughs, but because they were advocates for female education and forerunners of women's suffrage.

One example is **Mary Anning**, who against all the odds became one of the world's most famous fossil collectors. She was a gifted palaeontologist despite receiving no formal education. **Ada Lovelace** was the first computer programmer and daughter of Lord Byron. While mentored by Charles Babbage she was educated by two women - her mother and the mathematician and astronomer Mary Somerville. Botanist **Lydia Becker** provided plant specimens for Charles Darwin, and at the same time was a leader of the early suffrage movement and a promoter of female education.

Many years later the research of two women, **Dorothy Crowfoot Hodgkin** and **Jocelyn Bell Burnell** was recognised by awards in Chemistry and Physics. Although Bell Burnell missed out on a Nobel Prize for her discovery of pulsars. Both aspiring scientists may not have attained their scientific successes if their parents hadn't campaigned for their daughters to study 'science' instead of 'domestic science' at school.

We tell the scientific stories of Harriette Chick, Mary Barber and Mary Lyon. **Harriette Chick**, co-founded the Medical Research Council and discovered that cod liver oil and sunshine were an essential cure for rickets in children affected by malnutrition after the war. **Mary Barber** encouraged the wearing of face masks in hospitals to prevent cross-infection and began to pioneer the restricted use of antibiotics. Geneticist **Mary Lyon**, first described a process called X-chromosome inactivation that transformed our understanding of epigenetics and how genes are turned on and off.

Pioneers of Progress is the sequel to Heroes of Health, a comic book that described how the Medical Research Council began more than 100 years ago. It told the stories of some of the ground-breaking discoveries that researchers have made that are transforming the way we live.

We hope you enjoy this story from the book. There are seven more to discover in this instalment - get ready for the next instalment of Pioneers of Progress, as there are plenty more stories of pioneering women in science just waiting to be told...

For more information contact:

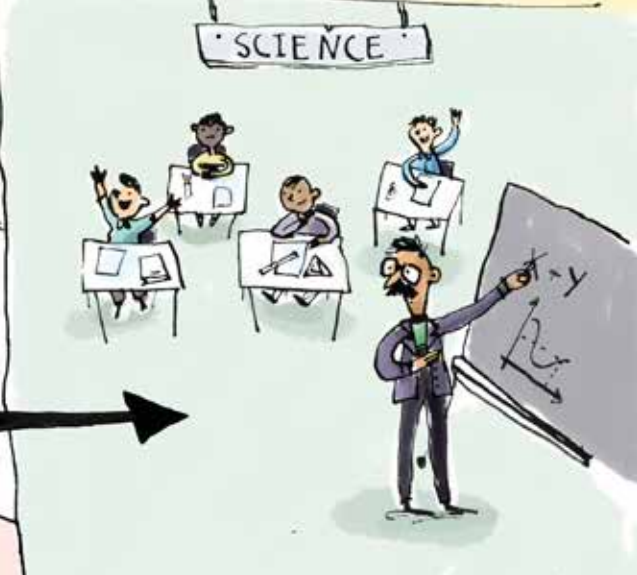
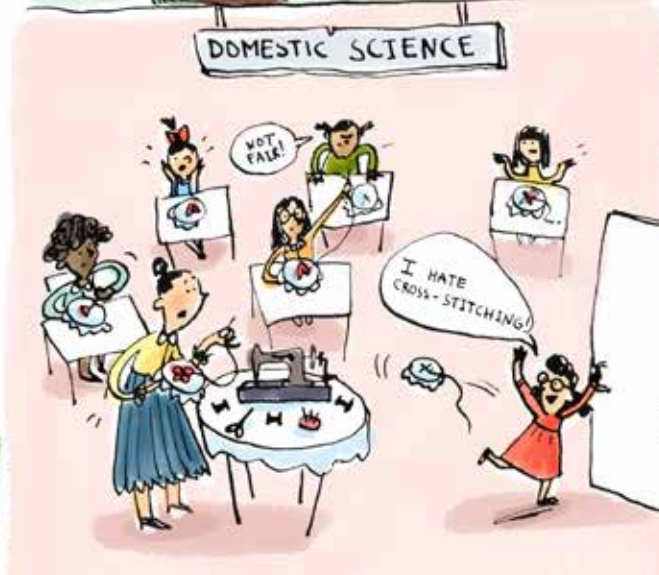
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JOCELYN BELL BURNELL

AND THE LITTLE GREEN MEN



LURGAN, NORTHERN IRELAND, 1954



1966. CAVENDISH LABORATORY, CAMBRIDGE









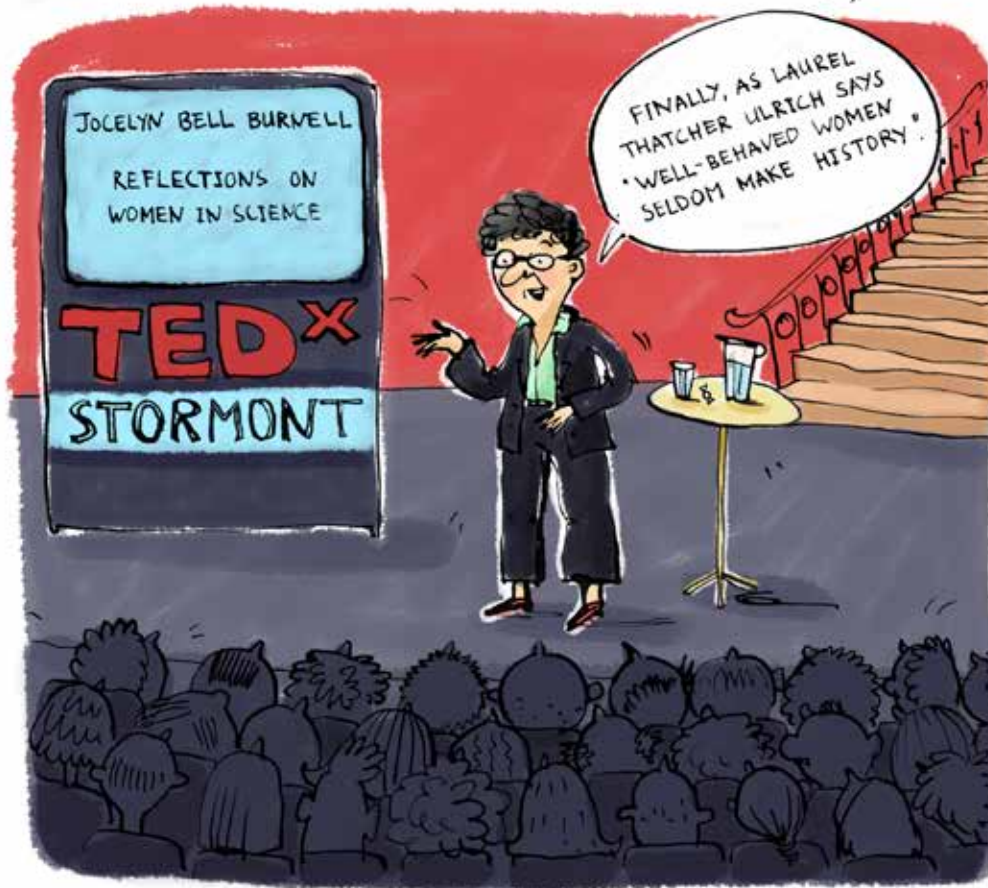
PRESS CONFERENCE, 1968



1974



2013



2018

YOU JUST GOT THE \$3 MILLION BREAKTHROUGH PRIZE FOR YOUR GROUNDBREAKING WORK ON PULSARS BUT OTHERS GOT THE NOBEL PRIZE FOR YOUR DISCOVERY. DOES THAT BOTHER YOU?

WHAT WILL YOU DO WITH THE MONEY?

THE MONEY WILL GO TO THE INSTITUTE OF PHYSICS TO FUND STUDENTSHIPS FOR PEOPLE UNDER-REPRESENTED IN PHYSICS.

I'M SPEECHLESS AND FEEL I HAVE DONE RATHER WELL OUT OF NOT GETTING A NOBEL PRIZE. IF YOU DON'T GET A NOBEL YOU GET EVERYTHING THAT MOVES. THAT'S MUCH MORE FUN!

Acknowledgements and thanks

These illustrated tales were developed thanks to research and ideas from Kiki von Glasow. The stories were shaped and edited by Professor Dame Amanda Fisher and Dr Jenna Stevens-Smith.

The beautiful illustrations are by Elina Ellis (Anning, Lovelace, Becker, Bell Burnell) and Lindsay McBirnie (Chick, Hodgkin, Barber, Lyon), with the cover and title pages by Elina Ellis.

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2020

WHAT ARE
THEY ON ABOUT?
THEY ALREADY
HAVE THE VOTE!



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