

ROSALIND FRANKLIN



FACT FILE

25 July 1920 – 16 April 1958

Rosalind Franklin's X-ray images of DNA played a huge part in the discovery of its double helix structure. The twisted ladder shape allows DNA strands to hold huge amounts of information.

Rosalind Franklin was born in London and studied physics and chemistry at Newnham Women's College at Cambridge University. In 1964 she moved to Paris where she became skilled in X-ray crystallography, using it to find the structure of different carbons.

Rosalind moved back to London in 1951 where she worked at King's College studying DNA. In May 1952 Rosalind took the infamous photo 51 which showed the X-ray diffraction pattern of DNA.

Rosalind's image formed a crucial part of James Watson and Frances Crick's (who were studying DNA at the same time) discovery of the double helix structure. Rosalind Franklin and Maurice Wilkins (who she worked with) were credited in Watson and Crick's paper about their findings, but unfortunately Rosalind died of ovarian cancer before Watson, Crick and Wilkins received their Nobel Prize. Nobel prizes are never awarded posthumously.

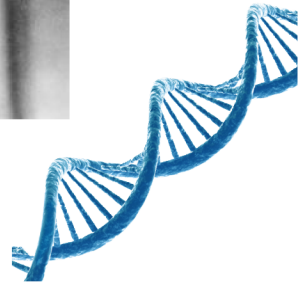
After Cambridge, Rosalind moved to Birkbeck College, London where she led a team who decoded the structure of the tobacco mosaic virus!

Rosalind Franklin may have missed out on a Nobel prize but she left behind a huge legacy. She received her PhD from Cambridge at a time when there were very few women chemists. She was often the only female presenter at scientific conferences and had to fight for the same status and pay as her male colleagues.



ACTIVITY

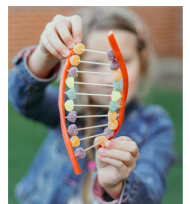
Make an edible model of DNA.



DNA consists of a 2 backbones holding together nucleotides. There are four different nucleotides: adenine, thymine, cytosine and guanine. We call these bases and usually refer to them by the first letter of their name. The two backbones twist together giving a double helix shape with the two strands held together by hydrogen bonds between the base pairs.

You'll need:

Gummy sweets - 4 colours
Toothpicks or cocktail sticks
Liquorice or other long, thin candy



Remember C and G and T and A always pair up, so assign a colour to each nucleotide and add pairs of sweets to your cocktail sticks.

Attach each end of the cocktail sticks to your liquorice, spacing them evenly apart.

Once you have a long enough string, twist it to give the spiral shape of a double helix.

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References - <https://www.rosalindfranklin.edu>