

DNA: the molecule that makes you you

Learn what you are made of and add colour to the molecule that encodes you. You have over two metres of DNA in almost all of your cells. When your cells need to divide, your DNA coils in a particular way and becomes visible under the microscope as chromosomes. You have 46 chromosomes in the nucleus of each cell, with 23 inherited from each parent. The word chromosomes means 'coloured bodies', as dyes used by pathologists make them stand out.

Add colour to make chromosomes colourful and marvel at what encodes you. This drawing is based on an image using a stain called Giemsa banding. Bands help identify which chromosome is which.

If you cut them out and organise them by size, you can match them in pairs from the largest to the smallest, from 1 to 22. If the remaining two are an odd pair it's a male with XY chromosomes, and if they match it's a female with XX. The bar represents one micrometre (one thousandth of a millimetre). Around 10 of the largest chromosomes would fit across the width of a human hair.



Genetics
Chromosomes

