



The Mystery of Life and DNA

A four-letter code that builds every living thing

Your genome

3 billion

letters in one copy of
the human genome

4

chemical letters: A, T, C
and G

~20,000

genes that code for
proteins

6 feet

of DNA in a single cell,
if stretched out

Most cells carry two copies, one from each parent.

From code to living thing

1

DNA stores the recipe

Genes are stretches of the four-letter code

2

RNA copies a gene

A working copy carries the message out

3

Ribosomes read it

Three letters at a time choose amino acids

4

Proteins do the work

Building tissue, digesting food, fighting germs

1953

Watson and Crick described the double helix, building on Rosalind Franklin's X-ray images.

What we know and don't

Known

- How DNA copies itself
- How genes become proteins
- The full human sequence, finished in 2003

Still unknown

- How the first living cells formed
- How the first self-copying molecules arose
- Whether life began elsewhere too

Sources: National Human Genome Research Institute; Nature

Remember

Four chemical letters, arranged in 3 billion steps, spell out a human being, but how life first began is still unsolved.