

Pack 5: DNA & Genetics



Inheritance

Children look a bit like their parents, and that's not a coincidence. Parents pass on a set of instructions that shape how their children grow, from eye color to height.



Eye color

The color of your eyes comes from instructions called genes, passed down from your parents. Different combinations produce brown, blue, green, or something in between.



Cell nucleus

Every cell in your body has a nucleus, and inside it sits the full set of instructions that makes you who you are. This is where your genes are stored.



Chromosomes

Inside the nucleus, the instructions are bundled into 46 neat packages called chromosomes. You got 23 from your mother and 23 from your father.



DNA

Each chromosome is made of a long, twisted molecule called DNA, the famous double helix. It carries the code for everything your body needs to build and run itself.



RNA

When a cell needs to use a gene, it copies the instruction into a molecule called RNA. RNA carries the recipe out of the nucleus to the machinery that builds it.



Ribosome

The tiny machine that reads the RNA message and builds what it describes. It links amino acids together one by one, following the instructions exactly.



Protein

What the ribosome builds. Proteins do almost everything in your body, from making muscles strong to giving your eyes their color. They are the workers of the cell.