What is the nervous system?

KS2 KS3 Ages 7-14 ⏰ 2 min read

Right now, as you're reading this, billions of tiny electrical signals are zipping around inside your body at incredible speeds. They're carrying messages from your eyes to your brain about the words on this page, from your brain to your muscles to keep you sitting upright, and from your skin to your brain about the temperature of the air around you. This amazing communication network is called your **nervous system**.

The Command Centre and Its Messengers

Your nervous system has two main parts. First, there's your **central nervous system** — that's your brain and spinal cord, which act like the command centre of your body. Your brain makes decisions and your spinal cord is like a superhighway that carries messages up and down between your brain and the rest of your body.

The second part is your **peripheral nervous system** — all the nerves that branch out from your spinal cord to reach every corner of your body, from your fingertips to your toes. These nerves are made up of special cells called **neurons**, which are basically your body's electrical wires.

Think of your nervous system like the internet. Your brain is like a powerful computer server, your spinal cord is the main fibre optic cable, and all your nerves are like the smaller cables that connect every device in your house to the internet.

Lightning-Fast Communication

When you touch something hot, neurons in your skin instantly send an "Ouch, that's hot!" message racing up to your brain. Your brain processes this information and immediately sends back a "Move your hand away now!" command. This entire conversation happens faster than you can blink — literally in milliseconds.

But your nervous system isn't just about emergency responses. It's constantly working in the background, controlling your heartbeat, helping you balance when you walk, and even managing your breathing while you sleep.

More Than Just Reflexes

Your nervous system also handles all your thinking, learning, and remembering. When you figure out a maths problem, recognise your friend's laugh, or remember what you had for breakfast, that's all your nervous system at work. It's storing information, making connections, and helping you make sense of the world around you.

Every sensation you feel, every movement you make, and every thought you think depends on this remarkable network of neurons firing electrical signals at lightning speed throughout your body.

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