How does a VPN work?

KS3 KS4 Ages 11-18 ⏰ 2 min read

When you connect to the internet normally, your data travels like a postcard through the mail system. Anyone handling that postcard along the way can read what's written on it. A **VPN** (Virtual Private Network) changes this by wrapping your data in a protective envelope that only you and your destination can open.

Your Digital Disguise

Every device connected to the internet has an **IP address** — think of it as your home address, but for computers. When you visit websites, they can see this address and know roughly where you are in the world. A VPN gives you a temporary new address by routing your internet traffic through one of their servers first.

Imagine you're sending a letter but don't want the recipient to know where you live. You could post it to a trusted friend in another city, who then forwards it on your behalf. The final recipient sees your friend's address, not yours — that's exactly how a VPN works with your internet traffic.

The Encryption Shield

The real magic happens with **encryption** — a way of scrambling data so it looks like gibberish to anyone who intercepts it. When you connect to a VPN, your device creates an encrypted tunnel to the VPN server. All your internet activity travels through this tunnel, protected from hackers, your internet service provider, and even government surveillance.

This encryption is incredibly strong. Even if someone managed to intercept your data, they'd see nothing but meaningless jumbled characters. It would take powerful computers thousands of years to crack the code and read what you were actually doing online.

Why People Use VPNs

People use VPNs for various reasons. Some want privacy from companies tracking their online behaviour. Others live in countries where certain websites are blocked,

and a VPN helps them access information freely. Business people often use VPNs to securely connect to their company's network while working from home or travelling.

However, VPNs aren't magic invisibility cloaks. The VPN company itself can still see your internet activity, which is why choosing a trustworthy provider matters. Also, VPNs can slow down your internet connection slightly because your data has to travel further — making that extra stop at the VPN server before reaching its final destination.

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