



What is "the cloud"?

KS3 Ages 11-14 🕒 3 min read

"The cloud" is a marketing term for storing and running things on someone else's computers, accessible via the internet. When you upload a photo to iCloud or Google Photos, it goes to a server in a data centre somewhere. When you stream a film on Netflix, it's stored on Netflix's servers. When a business runs its software on Amazon Web Services, it's using Amazon's computers. All of this is "the cloud."

Before cloud storage, your music collection lived on your hard drive. It was only on that one computer. If the hard drive broke, everything was gone. Now, your music lives on Spotify's servers — thousands of computers in multiple locations. You access it from any device. The music doesn't disappear if your phone does. You've traded local storage for network storage — the benefit is access everywhere and backup built-in; the trade-off is you need internet to access it and you're trusting someone else with your data.

What is a data centre?

Data centres are the physical reality of "the cloud" — enormous buildings full of servers (powerful computers), cooling systems, and power supplies. A large data centre might house tens of thousands of servers drawing as much power as a small town. They're kept in carefully controlled environments — cool (servers generate enormous heat), dry, and backed up with multiple power supplies so a power cut doesn't take everything offline. The largest data centres occupy several football pitches.

Why does it matter where they are?

Data takes time to travel — even at the speed of light, distance adds delay (latency). A server in a data centre 10 miles away responds faster than one 3,000 miles away. This is why cloud providers have data centres on every continent, and why videos and websites are often served from the closest one to you. It's also why GDPR regulations about where EU citizens' data can be stored matter — data physically sitting on servers in a specific country falls under that country's laws.

