Why do we have day and night?

KS2 SCIENCE | EARTH AND SPACE | Ages 9-12 | ⏰ 3 min read

Earth is always spinning

Imagine you're standing outside and the Sun is shining down on you. It feels warm and bright because your part of **Earth** is facing towards the **Sun**. But here's the thing: **Earth doesn't stay still**. It's constantly spinning like a top, rotating on an invisible line called the **axis**. This spin is what creates day and night.

Think of it like a ball painted half black and half white, spinning under a bright lamp. The white half gets lit up (that's day), while the black half stays dark (that's night). As the ball spins, different parts take turns facing the light.

One full spin takes 24 hours

It takes **24 hours** for Earth to complete one full rotation on its axis. That's why we have a **24-hour day**. When your location on Earth is turned towards the Sun, you experience **daytime**. You see sunlight, it's warm, and the sky looks bright blue. Meanwhile, on the opposite side of Earth, it's dark because that part is facing away from the Sun—that's **nighttime** for them.

The Sun doesn't move—we do

Here's something that might surprise you: **the Sun doesn't actually move across the sky during the day**. It only looks like it does! From where you're standing on Earth, the Sun appears to rise in the east in the morning and set in the west in the evening. But really, it's **Earth rotating** that makes this happen. As your part of Earth spins towards the Sun, the Sun appears to rise. As your part spins away, the Sun appears to set.

Think of it like sitting on a merry-go-round at a playground. If you spin around while looking at a tree, the tree seems to move around you—but actually, you're the one moving!

Different places, different times

Because Earth is round and spinning, not everywhere has daytime at the same moment. When it's noon and sunny in **London**, it might be early morning in **New York**, or the middle of the night in **Tokyo**. This is why we have different **time zones** around the world. Each zone is based on where that part of Earth is in its rotation relative to the Sun.

So the next time you watch the sunset, remember: you're not watching the Sun disappear. You're watching your part of Earth spin away from it!