



Why We Have Four Seasons Throughout the Year

KS2 GEOGRAPHY

KS3 SCIENCE

Ages 10-14 ⌚ 3 min read

How Earth's Tilt Creates Seasons

Our planet Earth doesn't stand straight up like a spinning top. Instead, it's tilted at an angle of about **23.5 degrees**. This tilt is the real reason we have **four seasons**: spring, summer, autumn, and winter. As Earth travels around the **Sun** in a path called an **orbit**, different parts of the planet receive different amounts of sunlight.

Think of it like holding a basketball tilted sideways while you walk around a lamp. Sometimes the top of the ball gets closer to the light (summer), and sometimes the bottom gets closer (winter).

Summer: The Sun's Strongest Heat

During summer in your part of the world, your area of Earth is tilted **towards the Sun**. This means the Sun's rays hit your region at a steep angle and spend more hours in the sky each day. The Sun's energy is more concentrated, so it feels hot and sunny. Days are long and nights are short.

Winter: The Sun's Weakest Heat

Six months later, your area tilts **away from the Sun**. Now the Sun's rays hit at a shallow angle and spend fewer hours in the sky. The Sun's energy spreads out over a larger area, so it feels cold. Days are short and nights are long.

Spring and Autumn: In Between

Spring and autumn happen when Earth is positioned between summer and winter. The tilt is neither pointing towards nor away from the Sun, so day and night are roughly equal length. Temperatures are mild and comfortable. Spring brings new growth, while autumn brings leaves changing colour and cooler air.

Think of it like standing different distances from a heater. When you're close and facing it directly, you're warm (summer). When you're far away and turned sideways,

you're cold (winter).

The Same Time, Different Seasons

Here's something amazing: while it's winter in the **Northern Hemisphere** (the top half of Earth), it's summer in the **Southern Hemisphere** (the bottom half). This happens because the two hemispheres are tilted in opposite directions towards and away from the Sun at the same time. So when Australians are enjoying hot summer days, people in Canada are experiencing freezing winter weather.