



How Plants Make Food Using Sunlight

KS2 SCIENCE

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Ages 9-14 ⌚ 3 min read

What is Photosynthesis?

Plants are amazing because they can make their own food using nothing but **sunlight**, **water**, and **carbon dioxide** from the air. This superpower is called **photosynthesis**, which means "making with light." Unlike animals that need to eat other living things to survive, plants are like tiny solar factories that turn sunlight into energy they can use to grow.

How Does It Work?

Inside plant leaves, there are millions of tiny structures called **chloroplasts**. These contain a special green substance called **chlorophyll**, which gives leaves their colour and does all the hard work. When sunlight hits a leaf, the chlorophyll absorbs the light energy. At the same time, the plant's roots suck up water from the soil, and the leaves take in **carbon dioxide** from the air through tiny holes called **stomata**.

Think of it like a solar panel on a house - it catches energy from the sun and turns it into something useful!

The plant then combines these three ingredients (sunlight, water, and carbon dioxide) and transforms them into **glucose**, which is a type of sugar. This sugar is the plant's food - it gives the plant energy to grow big and strong.

What About the Oxygen?

Here's the really cool part: when plants make their food, they also produce **oxygen** as a waste product. This oxygen is released into the air through those same tiny holes in the leaves. So basically, plants are feeding themselves while also making the air we breathe - pretty incredible!

Think of it like you cooking dinner - you use ingredients to make food for yourself, but steam comes off as a byproduct too!

Why Does This Matter?

Photosynthesis is one of the most important processes on Earth. Without it, plants wouldn't grow, we wouldn't have food to eat, and we wouldn't have oxygen to breathe. This is why forests and gardens are so valuable – they're like Earth's life support system. Every time you see a plant in sunlight, remember it's busy making food and making oxygen, helping to keep our whole planet alive.