Blood circulation: your body's vital delivery system

KS4 BIOLOGY Ages 11-14 ⏰ 3 min read

Why does your body need blood?

Blood is like a delivery truck for your entire body. It carries **oxygen** from your lungs to every cell, and it picks up **carbon dioxide** (waste) to carry away. Your blood also transports nutrients from your food, fights infections, and helps control your temperature.

Think of it like a postal service: your heart is the sorting office, arteries are the delivery routes going out, and veins are the return routes bringing mail back.

How does the heart pump blood?

Your **heart** is a muscular pump about the size of your fist. It beats roughly **70 times per minute** and pushes blood out with each squeeze. The right side of your heart pumps blood to your lungs to pick up oxygen. The left side pumps oxygen-rich blood out to your whole body.

The journey around your body

Blood travels in one direction through a network of tubes. **Arteries** carry blood away from the heart at high pressure—they have thick, elastic walls to handle this. **Veins** carry blood back to the heart at lower pressure. **Capillaries** are tiny vessels where oxygen and nutrients actually leave the blood and enter your cells. This is where the real work happens.

Think of it like motorways (arteries) taking people away from the city, country roads (capillaries) where everyone gets off, and quiet roads (veins) bringing stragglers home.

A complete circuit

The journey takes about **60 seconds**. Blood leaves your heart through the main artery called the **aorta**, branches into smaller arteries that reach every organ and muscle,

then passes through capillaries where it exchanges oxygen for waste. The blood then flows into veins, which merge into two large veins that return blood to the heart. Then it happens all over again—about **100,000 times per day**!

Without this constant circulation, your cells would starve of oxygen within minutes. Every heartbeat keeps this life-saving system running.