



How do wildfires spread?

KS2 KS3 Ages 7-14 ⌚ 4 min read

In January 2025, fires tore through Los Angeles neighbourhoods at such speed that residents had minutes to evacuate. Entire streets were reduced to ash in hours. Wildfires have always happened — but they're now bigger, faster, and more frequent than at any point in recorded history. Understanding how they spread is the first step to understanding why.

The fire triangle

Any fire needs three things: fuel, heat, and oxygen. Wildfires are no different. The fuel is vegetation — dry grass, shrubs, trees. The heat is an ignition source — lightning, a spark, a discarded cigarette, a power line. The oxygen comes from the air. Remove any one of the three and the fire goes out. Firefighters work by attacking all three: cutting firebreaks (removing fuel), dousing with water (removing heat), and sometimes using controlled burns (consuming available fuel before the main fire can reach it).

🌪️ Think of a wildfire as a living thing that eats the landscape and breathes air. The faster the wind blows, the more oxygen it gets and the faster it moves. When it reaches dense, dry vegetation it feeds more richly and grows. When the wind changes direction, it turns. A fire creates its own weather — the heat generates winds that carry embers ahead of the fire front, starting new fires kilometres in advance. A large wildfire doesn't just spread — it actively recruits.

Spotting — how fires jump

One of the most dangerous aspects of wildfires is spotting: burning embers carried on the wind that land ahead of the main fire front and start new ignition points. In severe fires, embers can be carried kilometres — sometimes ahead of fire trucks and evacuation orders. This is how fires jump roads, rivers, and firebreaks. It's what makes wildfires in strong wind conditions so lethal and unpredictable.

Why are they getting worse?

Climate change is the primary driver. Higher temperatures dry out vegetation more thoroughly, extending the fire season and increasing the flammability of fuel. Drought weakens and kills trees, adding more dead wood to the landscape. Decades of fire suppression in some regions (particularly the American west) have allowed fuel to accumulate to historically high levels. And more people living in areas where wild land meets urban development (the wildland-urban interface) means more ignition sources and more infrastructure in fire's path.