

# Born of fire

LUMPS OF LAVA, COOL CRATER LAKES AND MASSIVE MOUNTAINS ARE JUST A FEW OF THE WAYS VOLCANIC PROCESSES SHAPE THE EARTH.

## Volcanoes new and old

Australia's mainland volcanoes are no longer active: the last volcanic eruption occurred around 6000 years ago at Mount Gambier in South Australia. Most of the continent's volcanoes are in a chain from Queensland to Victoria – the longest chain of continental volcanoes in the world! Their activity covered large areas of land with lava millions of years ago.

## Lava lava everywhere

When a volcano erupts it spews out steam, ash clouds, sulfur, lava and solidified rocks called volcanic bombs. When some of these materials mix together, they can form a pyroclastic flow that moves very quickly down the slope of the volcano, wiping out everything in its path.

## Explosive events

Some of the world's most famous volcanic eruptions, such as those from Indonesia's Krakatoa and Mount Vesuvius in Italy, were of cone-shaped stratovolcanoes. These volcanoes are made up of many layers called strata and are characterised by their explosive eruptions. The eruption of Vesuvius almost 2000 years ago completely wiped out the towns of Pompeii and Herculaneum.

## Shallow shields

Unlike the tall stratovolcanoes, shield volcanoes have a flattened dome-like shape and can span hundreds of kilometres across. This is because they erupt runny lava which can quickly flow over large areas. Eruptions are relatively calm compared to other volcano types. Mount Warning in New South Wales is a remnant of the Tweed shield volcano, which was once over 100 km in diameter.

## Magma maze

Magma chambers are large pools of melted rock below the volcanic cone.

## Eroding over time

Once the source of heat that fed a volcano has gone, a plug of hard volcanic rock remains. Crater lakes form when water fills the depression left by an old volcanic caldera (a crater formed by a volcanic collapse or explosion).

## Super soils

Have you ever noticed that lush green forests are often found near old volcanoes? This is because fallen volcanic ash helps form rich fertile soil. The powdery consistency of this soil helps to hold water in the ground, making it ideal for farming.