

## Yr9 Earthquakes Work

### 11.6

## What do we know about earthquakes

**Learning objectives**

- ▶ To understand what an earthquake is and what damage they may cause.
- ▶ To understand what causes them to occur and how they are measured.

**How does an earthquake occur?**

An earthquake is a sudden violent movement of the Earth's surface. It occurs when two plates suddenly move past each other. The area where they slip is called a fault.

Earthquakes occur near the Earth's surface and go to a depth of about 700 km. Below 700 km the rocks become too hot and flexible to break. They just bend very slowly.

The 'power' of an earthquake reduces the further away it is from the focus. The strength of shaking at the surface is much less for earthquakes that happen deeper into the lithosphere. Shallow earthquakes are found at mid-ocean ridges while at subduction zones earthquakes range from shallow to deep.

**Earthquake in Nepal, 2015**

On Saturday 25 April 2015, the streets of the Nepalese capital, Kathmandu, were busy with residents and tourists meeting friends, selling their produce in the markets or preparing for lunch. At 11:56 a.m. everything changed. A massive earthquake struck. It was the biggest earthquake in Nepal for over 80 years, the previous large earthquake occurring in 1934.

The epicentre of the quake was Barpak village, around 75 km north-west of Kathmandu in the Gorkha region.

The seismic focus lay at a depth of 10 km, close to the surface. The million-strong population of Kathmandu had their lives thrown into chaos, along with the residents of the many villages within a 100 km radius of the quake.

**A How an earthquake occurs**

**B The collision of the Eurasian and Indian plates**

Nepal sits on the boundary of the two tectonic plates that collided to build the Himalayas. The ongoing convergence also means earthquakes (see Map C).

**TASK 1:** Give a definition for each of the following keywords: Earthquake, Epicentre, Focus, Seismic Waves, Mainshock and Afterschock.

**TASK 2:** Explain how an earthquake happens?

**TASK 3:** Write a newspaper article on the Nepal 2015 Earthquake. You need to describe when it happened, alongside an overview of it, as well explaining how it was caused. Use the information above to help you. Be creative in your work and include pictures and/or a map.