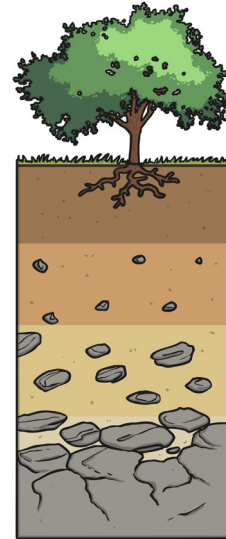


| Key Vocabulary            |   |
|---------------------------|---|
| <b>cumulonimbus cloud</b> | Large thunderstorm clouds.  |
| <b>erupt</b>              | To suddenly burst out causing lava to explode out of the earth's surface.                         |
| <b>fossils</b>            | The remains of plants or animals that lived a long time ago which can be found deep in the earth. |
| <b>magma</b>              | Extremely hot, liquid rock.   |
| <b>tectonic plates</b>    | The earth's crust is made up of large areas called <b>tectonic plates</b> that join together.     |



| Layers of Soil |  |
|----------------|--|
| <b>humus</b>   | Rotting dead leaves and animals.   |
| <b>topsoil</b> | Plant's roots grow here. Very few rocks.                                   |
| <b>subsoil</b> | Rocks and stones. Full of nutrients. Tree roots may reach. <b>Fossils.</b> |
| <b>bedrock</b> | A mass of rocks. <b>Fossils.</b>   |

### Layers of Earth

**Crust**  
Thin outer layer. Hard rock. 10km–90km thick.

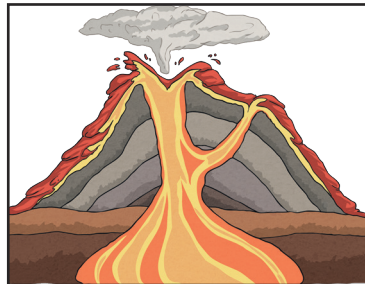
**Mantle**  
Extremely hot rock that flows. 3000km thick.

**Outer core**  
Iron and nickel. Mostly liquid with some rocky parts. 4000°C.

**Inner core**  
Iron and nickel. Hottest layer at over 5000°C.

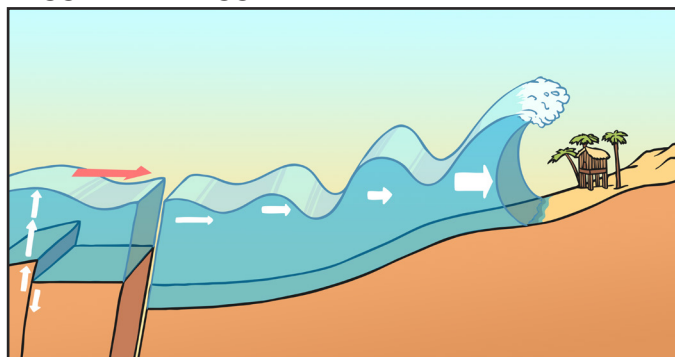
## Volcanoes

- Volcanoes are made when pressure builds up inside the earth. This affects the earth's crust causing **magma** to sometimes **erupt** through it.
- Active volcanoes have **erupted** in the last 10 000 years.
- Dormant volcanoes haven't **erupted** in the last 10 000 years but may erupt again.
- Extinct volcanoes aren't expected to **erupt** again.



## Tsunamis

- A tsunami is a giant wave caused by a huge earthquake under the ocean.
- The earthquake causes a large amount of water to be displaced very quickly causing a series of waves.
- As the waves travel through shallower water near land, they get bigger and bigger. The wave crashes onto the land causing devastation to buildings and sometimes even lives.



## Tornadoes

- A tornado is a swirling funnel of air that forms when warm air rises from near the ground into big **cumulonimbus clouds**.
- There can be thunder and lightning at the same time.
- You can see tornadoes due to the dust and water droplets caught in the clouds.
- Storm chasers are film-makers and scientists who head towards the storms. They film the tornadoes and collect data about them.
- Most tornadoes happen in Tornado Alley in America – more than 500 each year.
- Tornadoes can happen in the UK but only around 30 per year.



## Earthquakes

- Earthquakes are caused when the earth's **tectonic plates** suddenly move.
- Most earthquakes occur near the **tectonic plate boundaries**.
- Earthquakes can cause lots of damage to roads, buildings and property.

