Year 3/4

Spring 1



What makes the earth angry?

Background Understanding

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.

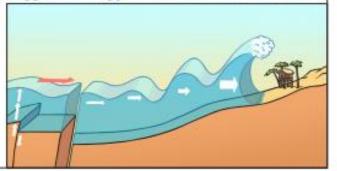


Extinct volcanoes aren't expected to erupt again.

Tsunamis

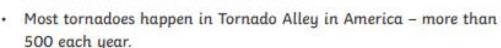
- A tsunami is a giant wave caused by a huge earthquake under the ocean.
- The earthquake causes a large amount of water to be displaced very quickly causing a series of waves.
- As the waves travel through shallower water near land, they get bigger and bigger. The wave crashes onto

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.



Tornadoes can happen in the UK but only around 30 per year.

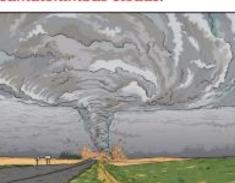
Earthquakes

Earthquakes are caused when the earth's tectonic plates suddenly move.

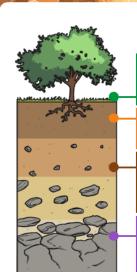
 Most earthquakes occur near the tectonic plate boundaries.

 Earthquakes can cause lots of damage to roads, buildings and property.





| Key Vocabulary | |
|---------------------|---|
| Erupt | To suddenly burst out causing lava to explode out of the earth's surface. |
| Lava | The molten, fluid rock that erupts from a volcano. |
| Magma | Hot fluid or semi-fluid below the earth's crust. |
| Molten | Something made into a liquid by heat. |
| Tectonic plates | Plates that make up the surface of the Earth. Study of their movement is called plate tectonics. |
| Active | A volcano that has erupted in the last 10,000 years. |
| Dormant | A volcano that hasn't erupted for 10.000 years but may erupt again. |
| Extinct | A volcano that is not expected to erupt again. |
| Tsunami | A giant wave caused by a huge earthquake |
| Earthquake | Caused when the earth's tectonic plates suddenly move |
| Tornado | A swirling tunnel of air that forms when warm air rises from near the ground into big cumulonimbus clouds |
| Cumulonimbus clouds | Huge clouds of air that are part of a tornado |



Layers of Soil

Humus

The very top layer of soil, made up of rotting dead leaves and animals.

Topsoil

Where plants grow their roots. Very few rocks.

Subsoil

More rocks and stones in clay. This soil is full of nutrients. Tree roots may reach into this soil. You might find fossils here.

Bedrock

A mass of rock such as granite, basalt, quartzite, limestone or sandstone. You might find fossils here.









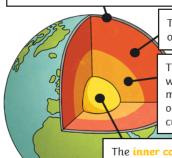






Layers of the Earth

The **crust** is the thin outer layer of cold, hard rock that covers the Earth. It is 10km-90km thick.



The **mantle** (extremely hot rock that often flows like treacle) is 3000km thick.

The **outer core** is mostly made up of iron, with some nickel. It is over 4000°C. it is mostly liquid with some rocky parts. The outer core moves around the inner core, creating the Earth's magnetism.

The inner core, which is made of iron and nickel, is the hottest layer of the Earth at over 5000°C. It melts the metals in the outer core to form magma.