Why do some earthquakes cause more damage than others?

Year: 3

Strand: Locational & Place Knowledge, Human & Physical geography



What should I already know?

- Year 1- Identify four countries (England, Northern Ireland, Scotland and Wales) that make up the United Kingdom.
- Year 2 There are 7 continents Asia, Africa, North America, South America, Antarctica, Europe and Oceania.
- There are 5 oceans, The Pacific, Atlantic, Indian, Artic and Southern Ocean.

75% of the world's volcanoes are found in the Ring of Fire where two tectonic plates meet.

Earthquakes occur when two plates which had been rubbing together get stuck and then suddenly slam into a new position.

Over 80% of the most powerful earthquakes happen along the Ring of



What will I learn during this unit?

- 1. Why 22nd February 2011 is important in NZ and world geography.
- 2. How New Zealand has been affected by earthquakes in the past.
- 3. Why New Zealand has so many earthquakes.
- 4. Why the largest earthquakes always cause the most death and destruction.
- 5. Why most volcanoes happen in the same places as earthquakes.
- 6. What the Pacific Ring of fire is.

Inside the Earth Geography skills

I can **locate**, **describe** and **explain** why so many earthquakes happen around the Pacific Ring of Fire.

I can **understand and explain** why the most powerful earthquakes do not necessarily cause the most destruction.

Sticky Knowledge

- New Zealand is in the Southern Hemisphere.
- New Zealand lies on the edge of the Australian and Pacific Plate.
- On 22 February 2011, at 12:51 pm, Christchurch was struck by a magnitude 6.3 earthquake.
- The Christchurch earthquake caused extensive damage to infrastructure and buildings.

 Multiple buildings collapsed, and the city was impacted by burst water mains, flooding and power outages.
- Most earthquakes and volcanoes occur because of the movement of tectonic plates.
- The Ring of Fire is a path of active volcanoes and frequent earthquakes around the Pacific Ocean. The majority of Earth's volcanoes and earthquakes take place here.

How many of the plate names can you remember?

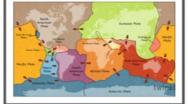


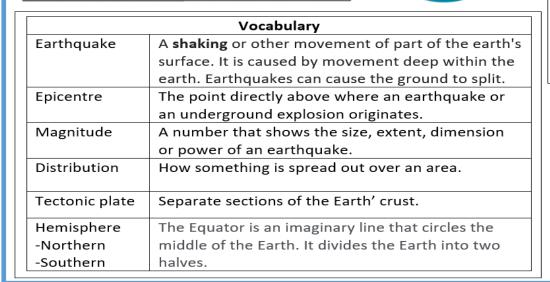
Tectonic Plates

Tectonic plates are pieces of land that connect together on the Earth's outer shell.

They bump together and move even though it is only a couple of centimetres a year.

This movement causes all kinds of things to happen such as volcanoes, earthquakes and tsunamis.









Geography

Topic: Why are jungles so wet and deserts so dry?

Year: 3

Strand: Locational & Place Knowledge, Human & Physical geography

What should I already know?

- Year 1- Identify four countries that make up the United Kingdom.
- Year 2 There are 7 continents Asia, Africa, North America, South America, Antarctica, Europe and Oceania.
- There are 5 oceans, The Pacific, Atlantic, Indian, Artic and Southern Ocean.



Atacama Desert



Amazon Basin

<u>Substantive Knowledge</u> (Sticky Knowledge)

Position in relation to the equator makes the climate different across the UK.

The worlds climates are polar, cold and wet, continental, temperate,
Mediterranean, warm and wet, tropical, equatorial and dry.

Plants and animals natural environment can be linked to the climate and landscape. For example, a macaw parrot lives in the rainforest.

The Amazon Rainforest is so wet and humid because it is a tropical biome with a lot of rainfall.

Arica's location to the Andes mountains makes it the driest place on Earth.

Climate varies, even across a relatively small country in terms of land area as the UK e.g. North to South.

What will I learn during this topic?

- 1. Why is the climate different across the United Kingdom?
- 2. What are the world's climates?
- 3. How do climate graphs help Geographers compare the climate of one place with another?
- 4. How does the climate affect the plants and animals living in a place?
- 5. Why is the jungle of the Amazon Rainforest is so wet and humid?
- 6. Why is Arica is the driest inhabited place on Earth?

Disciplinary Skills

I can **summarise** and **explain** why areas of tropical rainforest such as the Amazon Basin have so much rainfall and why Arica is the driest inhabited place in the world.

I can **demonstrate understanding** of how climate affects both the landscape of different biomes and the plants and animals that can live there.



There are four main biomes on dry land – forest, grassland, desert and tundra.

There are also biomes such as coral reefs in the sea and oceans.

Vocabulary			
Northern and	The Northern Hemisphere refers to the half of		
Southern	the planet that is north of the equator, while		
Hemisphere	the Southern Hemisphere is all of the planet south of the equator.		
Climate	The average measurements of temperature,		
	wind, humidity, snow, and rain in a place over		
	the course of years.		
Biome	A large region of Earth that has a certain		
	climate and certain types of living things.		
Longitude	Lines on a map/globe used to describe the		
Latitude	location of any place on Earth. Lines of		
	longitude run in a north-south direction. Lines		
	of latitude run in an east-west direction across		
	Earth.		
Adaptation	adapts, adapting, adapted		
	To change for a particular use.		





Geography

Topic: How can we live more sustainably?

Year: 3

Strand: Locational & Place Knowledge, Human & Physical geography

What should I already know?

- Year 1-- Human features of local area. Identify four countries that make up the United Kingdom.
- Year 2 There are 7 continents Asia, Africa, North America, South America, Antarctica, Europe and Oceania.
- There are 5 oceans, The Pacific, Atlantic, Indian, Artic and Southern Ocean.

11 areas of sustainability

Energy

Litter

Waste

Water

Transport

Healthy living

Biodiversity

School grounds

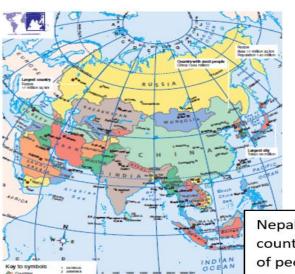
Global perspective

Green procurement

Pupil participation

Every day more energy is received from the sun in one hour than all 7 billion people in the world use in one year!





Vocabulary	10	
Sustainable	Being able to do something for ever without having a negative impact on the environment or on people.	
Solar energy	Energy given off by the sun's ray.	
Wind turbine	An engine that turns wind	
	movement into energy usually electricity.	
Finite	Non-renewable, ultimately run out altogether such as quarrying for coal and drilling for gas.	
Infinite	Renewable, that will not run out such as wind, tidal, solar.	
Atmosphere	Is the layer of gas that surrounds Earth.	

Nepal is one of the very poorest countries in the world. Only 24 percent of people here have electricity! Adult lapwing

How the United Kingdom generates its electricity 2015 and 2020

Source of electricity	2015 %	2020 %
Coal	31	20
Oil	1	1
Nuclear	18	11
Renewables	18	30
Gas	31	29
Other sources	1	9

What will I learn during this topic?

- What being sustainable actually means.
- 2. How we help make our school more sustainable.
- 3. Why we are seeing more wind and solar farms in the countryside.
- . How sustainable development is helping the lapwing out of the red.
- 5. How solar cookers are helping Sunita and her family live more sustainably.