

Geography Subject Knowledge Organiser

Year 5: Beneath our Feet

Key Geography Concepts:

Physical
Human
Locational
Place knowledge
Geographical Skills
Vocabulary

What you will have learnt by the end of this unit:

- Describe the properties of the Earth's layers.
- Compare the structure of the Earth to a common object.
- Explain how volcanoes are formed and what happens when a volcano erupts.
- Categorise volcanoes as extinct, dormant or active.
- Explain the impact of volcanoes on people and the environment.
- Compare the strength of earthquakes.
- Explain how tsunamis occur and how we can keep safe during a tsunami.
- Explain where tornadoes happen and how scientists compare tornadoes.
- Explain what a seismologist and volcanologist study.
- Know the different ways earthquakes, volcanoes and tornadoes are measured.

Key Skills I will learn/use:

- To create a cross section diagram of the earth, label and write a definition of each section.
- To label and describe the properties of a volcano.
- To locate using an atlas and explain why tsunamis occur in specific areas of the world.
- To talk about volcanoes using the language: active, dormant, extinct and explain what is meant by each description.
- To locate the earth's tectonic plates on a world map.
- To research volcanoes, earthquakes, tornadoes and tsunamis and explain what each one means.

Previous knowledge in Year 4 and so far in Year 5:

I know the name and locate the countries that make up the UK - England, Ireland, Scotland and Wales.
I have used the different vocabulary to describe our local area - hill, road, seaside, countryside.
I know the names of the seven continents, and Oceans of the world and can locate the Equator, and tropics.
I can talk about the similarities and differences of 2 contrasting locations.
I know 8 points of the compass and can explain at least 4 more points.
I can read 4 figure grid references and am beginning to read 6 figure grid references.
I know the physical and human features of a non-European country and can locate it on a world map.
I am beginning to understand how to use the words longitude, latitude, equator, tropics of Cancer and Capricorn when discussing the location of places.
I can locate, Sierra Leone and Kenya on a world map.
I can describe the location of features found on a map (including the equator and the tropics).
I can use aerial photographs to recognise landmarks and basic human and physical features.
I can find out about a non-European country (Sierra Leone)
I can understand the human impact on the physical landscape.
I can locate, some counties and major cities of the UK on a map
To describe the human characteristics and physical characteristic of an area.
I am beginning to talk about the similarities and differences of the local area over a period of time.
I am beginning to understand the human impact on the physical landscape.
I will be able to name and locate North Yorkshire and surrounding counties.
I can locate major cities of the UK and explain why they are classified as a city.
I can talk about the physical and human impacts on our local village and coast line.
The stages of the water cycle.
The journey that a river takes from source to mouth.
Some of the countries that make up Europe, North America and South America and their capital cities.
I will be able to identify key human and physical characteristics of these countries.
I will be able to describe similarities and differences between North Yorkshire and a region in France and be able to use geographical language to explain them.
I will be able to use maps and atlases to find capital cities of countries in Europe, North American and South America.

What have you learnt by the end of your Key Stage:

Location knowledge

G1: I can find and name countries in Europe, North and South America, and their major cities on a map.
G2: I can discuss the environmental regions and key physical and human characteristics of Europe and North and South America.
G3: I can locate and name counties and cities of the United Kingdom and the seas around them.
G4: I can identify human and physical characteristics of the UK, including hills, mountains and rivers and understand how some of these have changed over time.
G5: I can identify the position and significance of:
• Latitude and longitude
• Equator
• Northern and Southern Hemisphere
• The tropics of Cancer and Capricorn
• Arctic and Antarctic Circle
• The Prime/Greenwich Meridian and time zones (including day and night)

Place knowledge

G6: I can describe what is similar and what is different (human and physical geography) between a place in the United Kingdom, a region in a European country and a region in North or South America.

Human and Physical Geography

G7: I can describe and understand key aspects of physical geography including:
- climate zones
- biomes and vegetation belts
- rivers, mountains, volcanoes and earthquakes
- the water cycle

G8: I can describe and understand key aspects of human geography, including:
- types of settlement and land use
- economic activity including trade links
- the distribution of natural resources including energy, food, minerals and water

Geographical Skills and Fieldwork

G9: I can use maps, atlases, globes, and digital/computer mapping to locate countries and describe features studied.
G10: I can use the 8 points of a compass, 4 and 6 figure grid references, symbols, and keys (including the use of Ordnance Survey maps) to build my knowledge of the UK and the wider world.

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Key Knowledge:

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.

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

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.

Opportunities for teaching Diversity, Equality (including protected characteristics) and expanding Cultural Capital:

Make a Model Volcano - In this task, children create a simple cardboard model of a volcano labelled with key vocabulary.

What Would You Take?

In this task, children consider what items they would pack if they had to leave their house in an emergency.

My skills and knowledge that I may use from other subjects:

Mathematics -

Number using the scales that measure earthquakes and tornadoes.

Science -

To use knowledge of rock types when writing definitions of the earth's layers, volcanoes and earthquakes.

Literacy -

Reading and comprehension skills to further knowledge of volcanoes, earthquakes, tornadoes and tsunamis.

Art and DT -

To draw detailed diagrams of the earth's layers and volcanoes.

Recall and Remember:

- 1: Name and describe the 4 layers of the Earth?
- 2: What is the lithosphere?
- 3: How are earthquakes measured?
- 4: What does volcanology mean?
- 5: What is the VEI?
- 6: What do we mean by the term seismology?

Key Vocabulary:

Crust: Thin outer layer. Hard rock. 10km-90km thick.

Lithosphere: The upper layer of Earth, which includes its thin brittle crust and upper mantle. The lithosphere is relatively rigid and is broken into slowly moving tectonic plates.

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.

Tectonic plates: The earth's crust is made up of large areas called tectonic plates that join together.

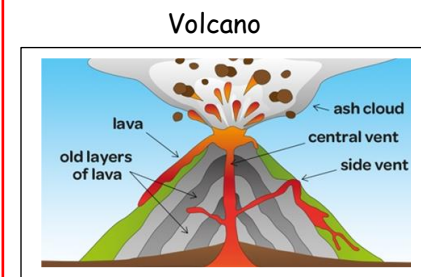
Seismology: The science of earthquakes to study the causes and effects of minute pulsation to most catastrophic natural phenomenon inside the earth.

The Richter scale: Also called the Richter magnitude scale and Richter's magnitude scale - is a measure of the strength of earthquake.

Volcanology: Is the study of volcanoes, lava, magma and related geological, geophysical and geochemical phenomena (volcanism).

Enhanced Fujita Scale: the way in which tornadoes are measured (their strength).

Volcanic Explosivity Index (VEI): Is the way to measure the strength of a volcanic eruption.



Volcano

Layers of the Earth

