

# Geography Subject Knowledge Organiser

## Year 4: 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:

- Name and describe the properties of the layers that make up the Earth.
- Name the key parts of a volcano.
- Explain how a volcano is formed and what happens when a volcano erupts.
- Show where most volcanoes are found.
- Explain how to keep safe during an earthquake.
- Describe a tsunami.
- Describe the damage caused by a tsunami.
- Explain how tornadoes form.
- Describe how scientists collect data about storms.

### Key Skills I will learn/use:

To create a cross section of the earth and label correctly.  
To locate volcanoes on a world map.  
To label a cross section of a volcano.  
To locate on a world map where tsunamis occur.  
To talk about volcanoes using the language: active, dormant, extinct.  
To locate the earth's tectonic plates on a world map.  
To research volcanoes, earthquakes, tornadoes and tsunamis.

### What I have already learnt in Year 3:

I live in England in a village called Hinderwell in the UK  
I know the name UK is used when people talk about the country I live in.  
I know the names of 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 the Oceans of the world.  
I am beginning to locate the Equator, and tropics.  
I can talk about the similarities and differences of 2 contrasting locations.  
I am beginning to read 4 figure grid references.  
How many counties make up the countries of the UK.

### What I have learnt so far in Year 4:

I will be able to name and locate North Yorkshire and surrounding counties.  
I can name and describe the parts of a river.  
I will be able to explain the water cycle.  
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.  
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.  
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.

# Geography Subject Knowledge Organiser

## Year 4: Beneath our Feet

### 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:

#### 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 talking about the layers of the earth.

#### Literacy -

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

#### Art and DT -

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

### Recall and Remember:

- 1: Name and describe the 4 layers of the Earth?
- 2: What happens when a volcano erupts?
- 3: What is a tornado?
- 4: What happens to the earth's tectonic plates during an earthquake?
- 5: How can we keep safe during an

### Key Vocabulary:

**Cumulonimbus cloud:** Large thunderstorm clouds.

**Erupt:** To suddenly burst out causing lava to explode out of the earth's surface.

**Fossils:** The remains of plants or animals that lived a long time ago which can be found deep in the earth.

**Magma:** Extremely hot, liquid rock.

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

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

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

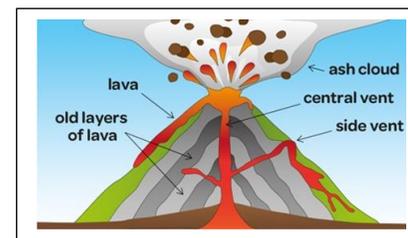
**Outer core:** Iron and nickel. Mostly liquid with some rocky parts. 4000°C.

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

**Tsunami:** A tsunami is a giant wave caused by a huge earthquake under the ocean.

**Tornado:** A tornado is a swirling funnel of air that forms when warm air rises from near the ground into big cumulonimbus clouds.

Volcano



Layers of the Earth

