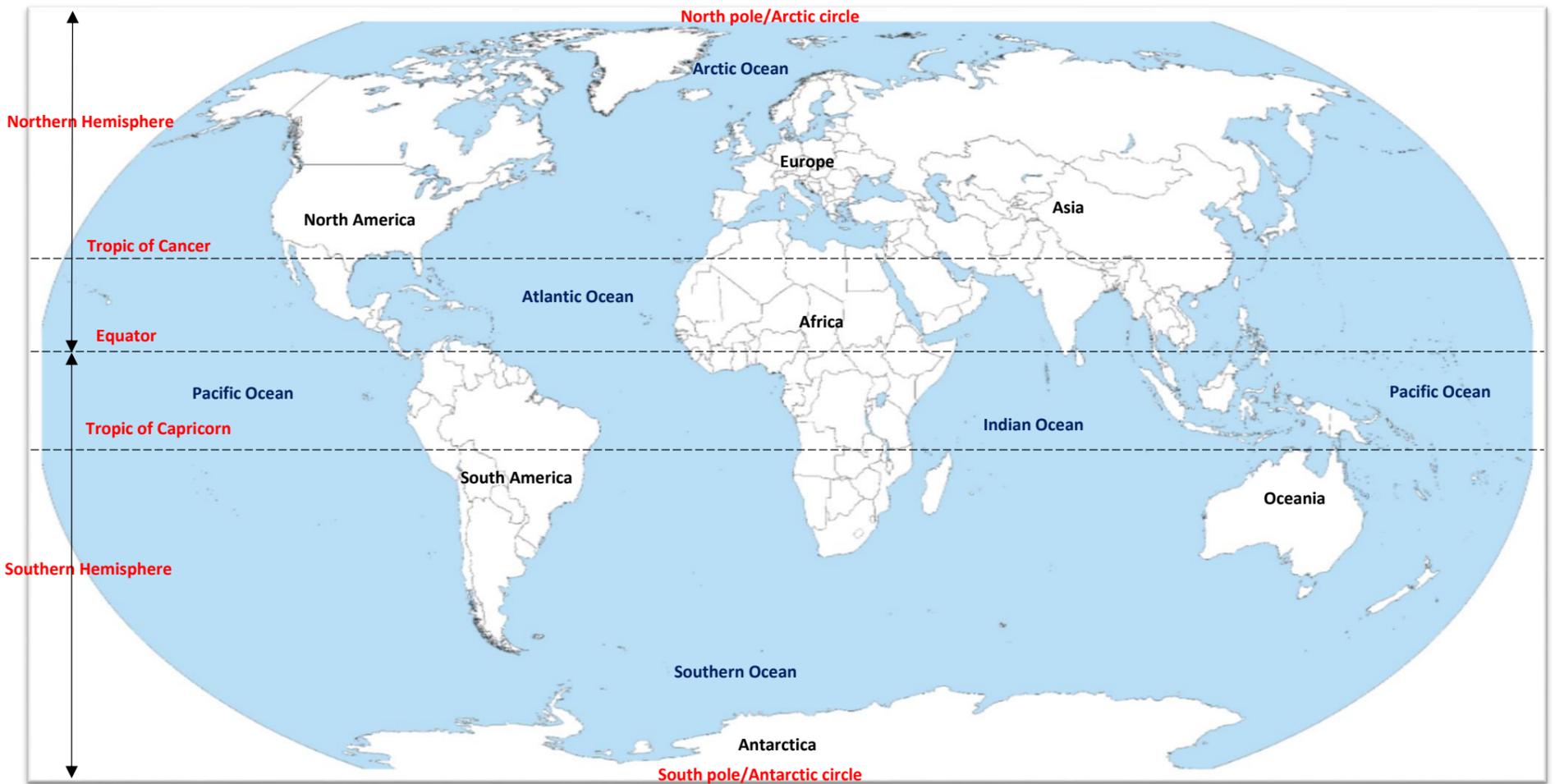


YEAR 4: AUTUMN 1 – DESTINATION EUROPE

GEOGRAPHY:

LOCATIONAL KNOWLEDGE - RECALL AND NAME:

The 7 continents:	Europe	Asia	Africa	Oceania	North America	South America	Antarctica
The 5 Oceans:	Pacific Ocean		Arctic Ocean	Atlantic Ocean	Indian Ocean		Southern Ocean
The 2 poles/circles:	North Pole/ Arctic Circle				South Pole/ Antarctic Circle		
Lines of Latitude and Hemispheres:	The Equator	The Tropic of Cancer		The Tropic of Capricorn	Northern Hemisphere		Southern Hemisphere



Major mountain ranges of the World	Himalayas, Asia	Andes, South America	Alps, Europe	Rockies, North America	Kilimanjaro, Africa	Snowdonia, UK		
Major volcanoes of the World	Mt Vesuvius, Italy	Mt. Krakatoa, Indonesia	Mt. St. Helens, USA	Mt. Eyjafjallajökull, Iceland	Mt. Etna, Italy	Mauna Loa, Hawaii		
24 of the countries and capital cities of Europe	France Paris	Spain Madrid	Portugal Lisbon	Italy Rome	Switzerland Bern	Austria Vienna	Germany Berlin	Belgium Brussels
	Netherlands Amsterdam	Denmark Copenhagen	Norway Oslo	Sweden Stockholm	Finland Helsinki	Czech Republic Prague	Greece Athens	Poland Warsaw
	Croatia Zagreb	Turkey Ankara	Russia Moscow	Ukraine Kiev	Bulgaria Sofia	Hungary Budapest	Romania Bucharest	Iceland Reykjavik

THINKING POINT:

Locational knowledge: The World

From memory, name the seven continents of the world.

From memory, name the five oceans of the world.

From memory, name the three major lines of latitude, two hemispheres and two circles/poles.

From memory, name some major mountain ranges of the world.

From memory, name some major volcanoes of the world.



THINKING POINT:

Locational knowledge: Europe

From memory, name the major countries and their capital cities of Europe.

EXIT ASSESSMENT: LOCATIONAL KNOWLEDGE AND UNDERSTANDING

EXS:

Can you name 15 countries and capital cities of Europe?
Can you name the two volcanoes in Italy?

GDS:

What is the locational difference between Italy and the UK?

YEAR 4: AUTUMN 1 – DESTINATION EUROPE

GEOGRAPHY:

UNDERSTAND, DESCRIBE AND EXPLAIN: LAND-USE NEAR VOLCANOES, TOURISM AND COMPARING CIVILISATIONS

Human Geography: Comparing human civilisations in various landforms, climates and terrains	Economy	Tourism	Trade	Agriculture	Transport	Types of settlement	Impact	Population	Climate
	Land-use	Terrain	Landform	Vegetation	Fertile soil	Minerals	Geothermal energy	Sustainability	

Re-visit and revise:

Key concepts: Locational knowledge of the world, the UK and Dorset, Tourism, land-use, rocks and soil
Key vocabulary: Locality, region, county, town, city, land-use, tourism, economy, settlement, agriculture/farming.

Living near a volcano:

Volcanoes can be **active**, **dormant** or **extinct**.

There are **500 active volcanoes** in the world and, on average, **25 volcanoes erupt every year**.

Some active volcanoes are **erupting lava, ash and toxic gases** on a continual basis.

However, **600 million people** live on, or near to, active volcanoes: that is **one in ten** of the world's population.

The question remains... why?

People **choose** to live near volcanoes because they believe that the **advantages outweigh the disadvantages**.

Most volcanoes are **safe for long periods of time** in between eruptions and volcanoes that **erupt frequently** are usually considered, by the people who live nearby, as being **predictable**.

THINKING POINT:

What do you predict the advantages and disadvantages of living near a volcano are?



The advantages:

1. Near volcanoes, the soil is fertile and rich in minerals which is good for agriculture/farming:

Volcanic rocks are **rich in minerals** which, over time, breaks down and nourishes the soil which is great for growing crops and farming animals.

In the foothills of **Mount Etna, Sicily**, the **fertile volcanic soils** support more than **90 vineyards**.

In **Naples, Italy**, in an area that **surrounds Mount Vesuvius**, the **soil is rich** because of two **large eruptions 35,000 years** and **12,000 years ago**.

The area is **intensively farmed** and produces a wide variety of **vegetation** such as grapes, citrus trees, herbs, tomatoes and flowers.



2. The presence of metals and minerals:

Sulphur is extremely valuable because it is used to **make a wide range of products**.

It can be **extracted** from the **vents of active volcanoes** to be sold.

Furthermore, **magma** rising deep from inside the earth **contains** a large **range of precious metals and minerals**.

Tin, lead, copper, gold, silver and **diamonds** can all be **found in volcanic rocks (igneous rocks)**.



3. Geothermal energy can be harnessed to produce electricity and sell:

'Geo' means **'of the earth'** and **'thermal'** means **'heat'**.

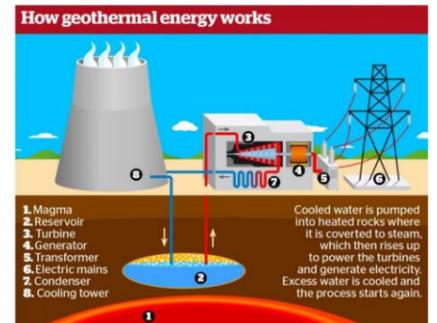
Therefore, **Geothermal energy** is the **heat that naturally occurs** underground in **volcanic areas**.

In many cases, this **geothermal energy** is evident in the form of **hot springs and geysers** (fountains of hot water that shoot out intermittently from a spring). In other cases, this **hot water is stored deep underground** and is used in **power plants to make electricity**.

The **heat** from **underground water** is used to **drive turbines** and to **produce electricity**.

Geothermal energy is a **sustainable energy source** as the heat from the earth will not be exhausted.

In addition, **geothermal energy** releases **less carbon dioxide** into the atmosphere than burning fossil fuels to produce electricity.



4. Tourism - volcanoes attract millions of visitors every year:

Whether they are **active, dormant or extinct**, **volcanoes** make for popular **tourist attractions** and attract **millions of visitors** every year.

The **Hawaiian Islands**, home of many volcanoes, attract approximately **8 million visitors each year**.

Tourism is Hawaii's **biggest employer** and earns the island approximately \$14 billion dollars per year.

3 million tourists visit the **Yellowstone National Park, Wyoming, USA** each year to see the **300 active geysers** in Yellowstone. The geyser named, **'Old Faithful'** erupts the most regularly (between 14 – 125 minutes between eruptions). Each normally lasts around 5 minutes.



THINKING POINT:

If you had to order the advantages from 1-4, how would you order them and why?



The disadvantages:

1. The destruction of homes, livelihood and danger of death:

Everything in the path of **advancing lava** will be **surrounded, buried or ignited**. Lava can reach **temperatures** of **1000°C**.

Many **homes and businesses** are **destroyed** because the **intense heat** in the volcanoes close vicinity can set **everything on fire**.

Lava moves quickly at the peak (top) of a volcano. At **lower lying areas**, it **travels relatively slowly** (between 1km and 10km per hour).

At this speed, lava **can be out run**. However, **deaths still occur** when people choose to watch the lava flows and then find that their **escape routes have been cut off**.

2. The release of poisonous gases in to the air:

Volcanoes can **emit large quantities** of **gas** on a regular, sometimes constant, basis.

The volume of **gas expands** as it leaves the volcano and can **rise** tens of kilometres into the **atmosphere** and **spread great distances**.

Different volcanoes release gases in different quantities. However, the **3 main gases** are **water vapour, carbon dioxide** and **sulphur dioxide**.

Carbon dioxide is **heavier** than **air**, so the gas may **flow** into **low-lying areas** in great concentrations which **can be lethal**.

Sulphur dioxide has a pungent 'bad egg' odour. It can **irritate the eyes, nose, throat and skin** and can cause **permanent lung damage**.

3. Ash:

Ash can **bury vegetation** and soil and can **choke people**. Falling ash can also turn **daylight into complete darkness**.

While we often think of ash as soft and fluffy, **volcanic ash is hard and abrasive**. It **does not dissolve** in water, can be **corrosive** and can even **conduct electricity** when wet.

THINKING POINT:

Considering there were four advantages, can you explain why people take the risk of the disadvantages?



Learning links:
Geography:
Y3: Tourism Land-use/Tourism/ Settlement/Economy
Y5: Rainforest Land-use/Agriculture/ Fertile soil
Y6: USA Tourism/Economy/ Trade

Learning Links:
Science:
Y3: Soil Fertile/Agriculture/ Minerals

Comparing human civilisations in various landforms, climates and terrains: Poole and Naples

Naples, Campania and **Poole, Dorset** will have many *similarities* and *differences*. Both rely heavily on **tourism** to boost their **economy** and attract large numbers of visitors every year. Both places boast **incredible examples of natural beauty** and have plenty to offer in terms of **entertainment**.



Naples, Campania, Italy		Poole, Dorset, UK	
Average Temperature Winter:	9°C	Average Temperature Winter:	6°C
Average Temperature Summer:	24°C	Average Temperature Summer:	16°C
Average Rainfall Winter:	13cm per month	Average Rainfall Winter:	13cm per month
Average Rainfall Summer:	3cm per month	Average Rainfall Summer:	7cm per month
Average Rainy Days Winter:	10 days per month	Average Rainy Days Winter:	15 days per month
Average Rainy Days Summer:	3 days per month	Average Rainy Days Summer:	10 days per month
Average Hours of Sunshine Winter:	4 hours per day	Average Hours of Sunshine Winter:	2 hours per day
Average Hours of Sunshine Summer:	10 hours per day	Average Hours of Sunshine Summer:	6 hours per day
Average Sea Temperature Winter:	17°C	Average Sea Temperature Winter:	12°C
Average Sea Temperature Summer:	26°C	Average Sea Temperature Summer:	16°C
Things to see and do in Naples:		Things to see and do in Poole:	
Climb Mount Vesuvius - volcano		Explore nature and wildlife in the many parks, forests and beaches	
Visit the ruins of Pompeii and Herculaneum		Learn a water sport in the 2 nd largest natural harbour	
Take a boat trip to the island of Capri		Take a boat trip to Brownsea island	
Eat at various pizzerias – famous Neapolitan pizza		Take a boat trip/tour of the Jurassic coast	
Visit Naples National Archaeological Museum		Spend the day at the beach (Sandbanks)	

Economy and Tourism:

In recent history, humans have become more and more interested in **visiting other parts of the world**, particularly for **holiday visits** and **tourism**. There are a variety of reasons that people like to visit **other countries**: to experience the different culture, for entertainment, to see the varying wildlife, and to witness the physical features of a different country – including volcanoes.

In order for **large numbers** of people to enjoy tourism and travelling, **places where tourism is a major economy** have purposely **built** suitable **types of settlements** to fit lots of people (**flats, smaller housing, hotels**) – the land is expensive and desirable to many.

Land-use in these places is mainly used for **settlement** and **entertainment**.

These places, like Poole and Naples, want to **attract people to visit (tourism)** so more **money is spent** by the visitors through **trade (shops/food/services)** to boost their **economy**.

THINKING POINT:

What is similar and different about Naples, Campania and Poole, Dorset?



This means that the local **councils** will have **more money** to spend on **maintaining and improving** their town.

To **persuade** more people to **visit**, councils must ensure that people enjoy their stay. They build on the land to ensure **ease of access** (roads, paths, train stations, bus lanes and high streets) and develop different forms of **entertainment** within the town.

This has both positive and negative **impacts** on the town and its **residents** (human and wild life).

THINKING POINT:

What do you think the positive and negative impact might be to local residents and wildlife of tourist spots?



KEY ASSESSMENT QUESTIONS AND SCENARIOS:

EXS:	GDS:
What are the advantages and disadvantages of living near a volcano? What does tourism mean and why is it important to Poole and Naples?	Considering both points of view, can you argue your opinion for living near a danger zone? How can Campania encourage more people to visit? What should they do?

YEAR 4: SPRING 1 – SURVIVORS

GEOGRAPHY:

UNDERSTAND, DESCRIBE AND EXPLAIN: FORMATION OF MOUNTAINS AND VOLCANOES

Physical Geography: Understanding the physical change/impact to land terrain over time: The formation of mountains & volcanoes	<i>Mountain</i>	<i>Earth's crust</i>	<i>Tectonic Plate</i>	<i>Plate boundary</i>	<i>Fold mountain</i>	<i>Fault-block mountain</i>	<i>Volcanic mountain</i>
	<i>Earth's core</i>	<i>Earth's mantle</i>	<i>Earth's crust</i>	<i>Molten rock</i>	<i>Magma/Lava</i>	<i>Convection currents</i>	<i>Converging plates</i>
	<i>Volcano</i>	<i>Erupt/ion</i>	<i>Active</i>	<i>Dormant</i>	<i>Igneous rock</i>	<i>Minerals</i>	<i>Fertile land</i>

Re-visit and revise:

Key concepts: Y3 & 4 Locational knowledge, land changing over time, rocks and soils.
Key vocabulary: hill, mountain, land-use, fertile, molten, crust, volcano, igneous rock.

What are mountains and volcanoes?

A **mountain** is a **geological landform** that **rises above** the surrounding **land**.

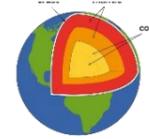
Typically, a mountain will rise **at least 1,000 feet above sea level**.

The **tallest** mountain in the **world**, Mount **Everest** in the **Himalayas**, rises above sea level by **29,036 feet (8,848m)**.

Small mountains (**below 1,000 feet**) are usually called **hills**.

THINKING POINT:

What is the difference between a mountain and a hill?



How are mountains and volcanoes formed?

Mountains are most often **formed** by **movement** of the **tectonic plates** in the **Earth's crust**.

The Earth's surface – **the crust** - is made of different sections called **plates** (like a **cracked egg shell**).

Tectonic plates are pieces of the **rocky outer layer** of the **Earth** known as the **crust**.

These plates are **constantly moving**, and volcanoes, earthquakes and sometimes mountains are found at the plate boundaries.

Tectonic plates move very **slowly**. It can take **millions and millions of years** for mountains **to form**.

There are **eight major plates**: Eurasian, Pacific, IndoAustralian, Antarctic, Nazca, North American, South American and African.

Great mountain ranges, like the Himalayas, often form **along the boundaries** of these **plates**.

THINKING POINT:

What are the names of the eight major tectonic plates of the Earth's crust?



The **Earth's plates** are **constantly moving**; on average, this movement is **between 1 and 10 cm per year**.

Convection currents in the **mantle** cause the **tectonic plates to move**.

The **mantle** is made of **molten rock (magma)**. As the **magma** moves, so do the plates above.

Occasionally, two **plates move closer** to each other, or **converge**; this creates **intense pressure**, causing the **plates to buckle and form a mountain**.

Fold mountains, **fault-block** mountains **and dome** mountains are generally **formed** within the **main body of the plate** (central).

Volcanic mountains are generally formed on the **plate boundaries**.

THINKING POINT:

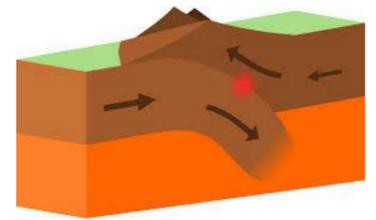
What is it that causes the plates to move?



What are the different plate boundaries?

Destructive Plate Boundaries:

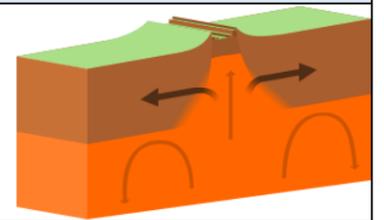
At a **destructive plate boundary** (also called **convergent** boundaries) two **plates** move **towards** another. One plate is then **pushed underneath** the other. (It is the **heavier plate** that is **forced beneath** the lighter plate). The **point** at which one plate is **forced beneath** the other is called the **subduction zone**. The **plate** then **melts** to become **molten rock (magma)**. The **magma** then **forces** its way up to the plate boundary to **form a volcano**.



Example: Eurasian plate and Pacific plate where over 400 volcanoes are formed – most underwater.

Constructive Plate Boundaries:

Constructive plate boundaries (also called **divergent** boundaries) **move apart** from each other. As they **move apart**, **molten rock (magma)** rises from the **mantle**, then **cools** and **hardens** to form new rock.

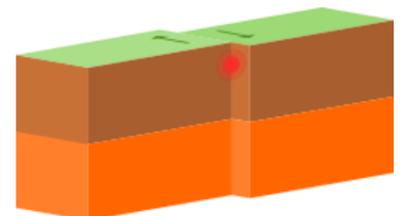


Example: Eurasian plate and North American plate (Iceland)

Transform Plate Boundaries:

At **transform plate boundaries** two **plates move past each other**.

Friction (rubbing) may **cause them to stick**, but when they eventually **become unstuck**, often with a **violent jolt**, an **earthquake** results.



THINKING POINT:

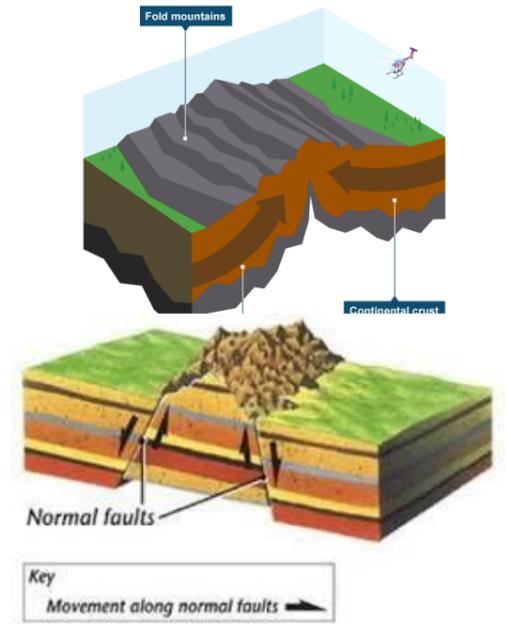
What are the three different types of plate boundary and what are the main differences between them?



Learning links:
Geography:
 Y6: Earthquakes
 Earth's crust/ Tectonic plates/ Plate boundaries/ Fault lines

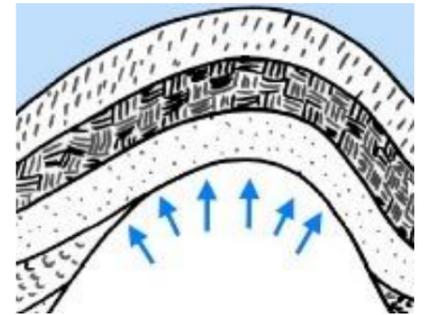
Learning links:
Science:
 Y3: Rocks
 Magma/Molten/ Igneous/ Minerals

FOLD MOUNTAINS: are the *most common* type of *mountain*.
 As *two plates* move *towards* each other they *buckle* and the *crust pushes upwards*, forming a *mountain*.
 Fold mountains are generally formed between 40-50 million years ago, which is geologically-speaking, young.
 They are often *high with steep faces*. *Examples* of fold mountains include The *Himalayas*, The *Andes*, The *Rockies* and The *Alps*.

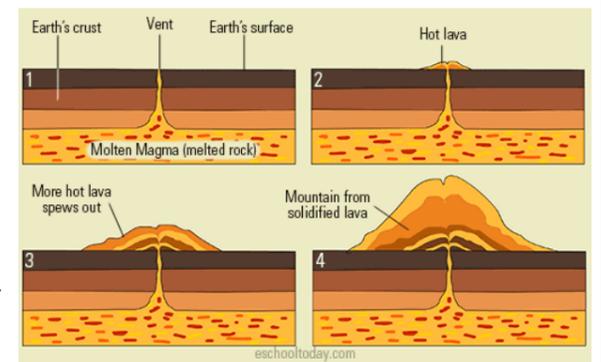


FAULT-BLOCK MOUNTAINS: are *formed* when *two plates* move *towards each other*.
 Rather than the crust folding under the pressure of the moving plates, it *cracks along lines of weakness* called *fault lines*.
 The *crust* then *breaks into blocks*, some of which are *pushed upwards* to *form mountains* or *downwards* to *form valleys*.
 An example of a fault block mountain range is the *Sierra Nevada* in Eastern *California, USA*.

DOMES MOUNTAINS: are the *result* of a great amount of *molten rock (magma)* pushing its way *up* under the Earth's crust.
Without actually *erupting* onto the surface, the *magma pushes up* the *crust* which then *bulges upwards*.
 Eventually, the *magma cools* and *forms hardened rock*.
 An example of a dome mountain range is the *Black Hills* in *South Dakota, USA*.



VOLCANIC MOUNTAINS: are *formed* when *molten rock (magma)*, deep within the earth, *erupts* and *piles upon the surface*.
Magma is called *lava* when it *breaks through* the earth's *crust*.
 When the *ash and lava cools*, it *builds a cone of rock upon the crust*.
 Over *long periods of time* and *multiple eruptions*, rock and lava *pile up, layer on top of layer* to *form a mountain*.
 Examples of volcanic mountains are *Mt. Vesuvius in Naples, Italy*, *Mt. Etna in Sicily, Italy* and *Mt. St. Helens in Washington, USA*.



THINKING POINT:

What are the four main types of mountain and can you explain how are they formed?



KEY ASSESSMENT QUESTIONS AND SCENARIOS:

EXS:	GDS:
How are volcanoes formed?	How do volcanoes change the land and land-use around them?

FIELDWORK IN THE LOCAL AREA – OBSERVE, MEASURE, RECORD AND PRESENT:

Traffic survey: Report the traffic conditions of surrounding roads	Ask questions/find problems and plan ways of finding answers or solutions	Design a survey format to collect answers systematically and accurately	Represent the data and find answers (tables, graphs)	Present the findings to others and how this impacts the local area	Plan for action – what would support change?
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LOCATIONAL KNOWLEDGE – USE RESOURCES TO LOCATE:

Globe:	<i>The 7 continents</i>	<i>The 5 Oceans</i>	<i>Major seas</i>	<i>2 poles</i>	<i>The Equator</i>	<i>The Tropics</i>
Atlas: (4 point grid reference)	<i>Specified countries within Europe and their capital cities</i>	<i>Italy and its major cities</i>	<i>Major rivers, seas, mountains and volcanoes of Europe (Physical)</i>		<i>Major man-made areas of interest of Europe (Human)</i>	
Map (Campania): (6 point grid reference)	<i>Towns and villages of Naples</i>	<i>Heritage sites of Naples</i>	<i>Human (man-made) features of interest in Naples</i>		<i>Physical (natural) features of interest in Naples</i>	
Compass:	<i>Use N, NE, E, SE, S, SW, W, NW to give and follow simple directions to reach a chosen destination in close range.</i>					