# Year 4 Autumn - Volcanoes and Earthquakes

## Volcanoes

	Key Vocabulary	
Crust	Thin outer layer of earth made of hard rock.	
Mantle	Extremely hot rock that flows.	
Outer core	Mostly liquid with some rocky parts, made up of iron and nickel.	
Inner core	Hottest layer at over 5000°C, made up of iron and nickel.	
Magma	Extremely hot, liquid rock.	
Eruption	When a volcano becomes active and ejects lava, ash, and gases.	
Lava	Fluid rock that erupts from a volcano.	





### What are volcanoes?

 Volcanoes are made when pressure builds up inside the earth. This affects the earth's crust causing magma to sometimes erupt through it.

Significant volcanoes: • Mauna Loa • Mount Vesuvius

Mount Fuji
Mount St Helens

- 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.

Earthquakes
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	Key Vocabulary	Significant
Tectonic plates	The earths outer layer is made up of large, moving pieces called tectonic plates. They are like huge jigsaw pieces.	earthquakes
Epicentre	The central point of origin of the earthquake.	÷
Fault line	A crack in the earth's surface where the risk of earthquakes can be higher.	<ul> <li>Turkey</li> </ul>
Richter scale	Developed by Charles Richter in 1935, it is a scale of levels from 0-10 used to measure the strength of an earthquake. Each level is ten times more than the level before it so level 4 is ten times greater than level 3.	• Napal • Haiti
Aftershock	A smaller earthquake that happens after, and because of, a larger earthquake.	• Japan
Seismic waves	A wave of energy that travels through the earth.	
Magnitude	The number given to show the size of the earthquake.	

#### What are 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.



### <u>Tsunamis</u>

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.



#### Our Lady & St. Edward's Year 4 Spring - Europe - Guadalajara: A European Study

## Key Vocabulary

Tourism	When people travel to a place for pleasure, such as a holiday. These people are called tourists. Tourism can be abroad or in the country you live in.
Currency	The money that a country uses. In the UK, it's the pound. In Spain it's the euro.
Europe	One of the seven continents of the world.
European Union	a group of twenty-seven countries in Europe that co- operate on trade and many other aspects of life.
Spain	A country in Europe.
Landscape	An area of land and everything you can see on it.
Migrant	A person who moves from one place to another, especially in order to find work or better living conditions.
Border	A line that separates two countries. You may need a passport to pass from one country to the other.
Population	The number of people living in an area

#### Europe



#### <u>Europe</u>

There are 51 countries in Europe and 742 million people living there which is 10% of the world's population.

- The continent is in the northern hemisphere with the Arctic Ocean to the north, the Atlantic Ocean to the west and the Mediterranean Sea to the south.
- There are many different landscapes, climates, physical and human characteristics all within Europe.

## **European Union**

The countries in the European Union: Austria, Belgium, Bulgaria, , Croatia, Cyprus, Czech Republic (Czechia), Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.



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#### <u>Guadalajara</u> Guadalajara is a city in Spain.

#### <u>Spain</u>

- Spain is a large country in Europe and shares borders with France and Portugal. It has the Mediterranean Sea on its east coast and the Atlantic Ocean on its north, west and south coast.
- The capital city of Spain is Madrid.
- The official language is Spanish.
- Spain has very hot weather in the spring and summer, making it a popular holiday destination, especially with people from the UK. In winter, temperatures in some parts of Spain can get cold, sometimes below 0°C, and it can snow.



# Year 4 Summer – Rivers

## Key Vocabulary

Reservoir	A man made lake that is used to store water.
Evaporation	When a liquid changes into a gas or
	water vapour.
Condensation	When a gas cools and changes to a
	liquid.
Precipitation	Precipitation occurs as water droplets
	get bigger and heavier, they begin to
	fall as rain, snow and sleet.
Dam	A barrier that blocks off flowing water.
Bank	The edge or border of a river.
Mouth	The place where a river enters the
	ocean, a lake, or a larger river.
Erosion	How wind, water and waves break
	down and remove rock and soil.
Current	The movement of water in a river.
Basin	An area of land drained by a river.
Valley	An area of land between hills or
	mountains, typically with a river or
	stream flowing through it.
Drainage	How water flows away from an area
	through rivers and streams.
Flood	Stopping or controlling floods.
management	
Irrigation	The supply of water, especially for
	growing crops.
Water vapour	Water that is in the form of a gas.

How Do We Use Rivers?				
Leisure	+	Controlled population of fish		
e.g. fishing	-	May leave litter and pollute the water		
Industry	+	Sections of rivers maintained		
e.g. factories	-	Chemicals pollute the water and habitats		
Tourism e.g.	+	Conservation and education about local wildlife		
walking routes	-	Too many people near wildlife habitats		

#### <u>Key Facts</u>

The world's ten longest rivers (the longest three first):

Nile (Africa), Amazon (South America), Yangtze (Asia), Mississippi(North America), Yenisei(Asia), Yellow (Asia), Ob-Irtysh (Asia), Paraná (South America), Congo (Africa), Amur(Europe/Asia)

- Rivers have many uses around the world, including cleaning, cooking, growing crops, transport and creating power.
- A river has three main stages: upper course, middle course and lower course. Flooding is caused by poor drainage around or close to a river.



- Some rivers join up with other rivers. The point where they meet is called the confluence.
- The source of most rivers is on high ground or in the mountains.

#### The Course of a River

**The Upper Course** Rain falling on high ground collects in channels and flows downwards forming a stream. Streams run downhill and join other streams, increasing in size and speed, forming a river. The river here flows quickly and the channel has steep sides and runs through valleys. Features include - waterfalls and rapids. **The Middle Course** Fast flowing water causes erosion

making the river deeper and wider. Features include - meanders. <u>The Lower Course</u> Rivers flow with less force due to being on flat land. The river deposits the eroded material that it has carried. Riverbanks have shallower sides. Features include - floodplains, deltas and estuaries

#### Rivers in England, at their mouths will flow into either the North Sea, Irish Sea, English Channel or Atlantic Ocean,



- Clouds form when warm, moist air is cooled. When it is cooled, it condenses into tiny water droplets which appear as clouds.
- Heat from the sun evaporates water, which rises, condenses in the cool air and then falls back down to earth.

