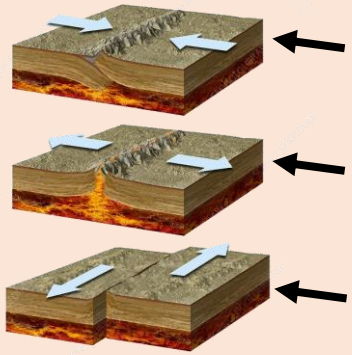
Knowledge Organiser

Subject	Year	Term	KO n.o.	Title
Geography	8	2		Tectonic Hazards

The three tectonic plate boundaries



Convergent plate boundary

Divergent plate boundary

Conservative plate boundary

Crust (or lithosphere)
The Earth's crust, which includes landforms, rocks and soil. It is mostly solid rock, is rigid and has high strength. It varies in thickness from as little as 5 km under the ocean to about 70 km under mountain ranges like the Himalayas.

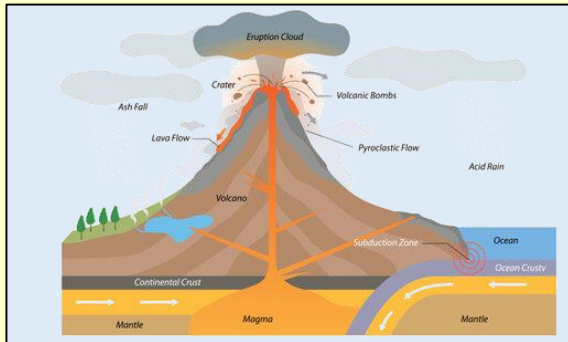
Atmosphere
A blanket of gases that surrounds the Earth to a height of approximately 145 km. Mostly made up of nitrogen and oxygen, which support life on Earth.

Mantle
Partially molten rock. Temperatures mostly between 500 °C and 2000 °C. About 2900 km thick. The top part of the mantle is the source of magma that erupts onto the surface.

Outer core
Molten iron and nickel. Temperatures mostly between 4000 °C and 6000 °C. About 2300 km thick.

Hydrosphere
The water on or at the surface of the Earth, including oceans, lakes, rivers, rain and mist.

Inner core
Mostly iron. Solid owing to the extreme pressure. Temperatures up to 7000 °C. About 1200 km thick.



VOLCANIC ERUPTION

Volcanic eruption at convergent plate boundary

The major tectonic plates with movement arrows

Key word	Definition
Tectonics	Something big to do with the Earth's crust
Boundary	The meeting point (of two tectonic plates)
Conservative plate boundary	Where the plates move alongside each other (rub!)
Convergent plate boundary	Where the plates move towards each other
Divergent plate boundary	Where the plates move away from each other
Hazard	An event (e.g. an earthquake) that has the potential (possibility) to destroy an area and to injure or kill people
Disaster	When a hazard DOES destroy lots of stuff, kill and injure people and reduce their quality of life
Impacts	The negative things that happen as a result of a hazard e.g. Deaths, disease, destruction of homes, loss of employment
Preparation	The things that countries and people can do to be ready for a hazard
Response	The things that countries and people can do once a hazard has occurred.

Factors impacting damage and deaths

- Not all volcanoes and earthquakes kill people
- A country's level of development is probably the thing that makes the biggest difference to this.
- Earthquakes in the middle of nowhere don't kill many people either!

Strength of the earthquake	The location of the epicentre	Building design and construction
Development of country	Time (time of day, day of the week, time of year)	The local landscape (Mountains? Near the sea? Remote?)
Public awareness and preparedness	Emergency services	Wealth of people / country

Earthquake Case Study – Turkey 2022

- 7.8 on the Richter Scale
- Winter time - so people froze
- Night-time - so people were not prepared
- Lack of building regulations/laws – lots of buildings collapsed
- 60,000 deaths

Earthquakes

EPICENTRE: The point directly above the focus on the surface of the Earth. This is where the greatest damage usually occurs.

WHAT CAUSES EARTHQUAKES

1. Tectonic plates get locked together.
2. Pressure builds up
3. The pressure is released suddenly
4. Causing seismic waves and the shaking of the earth

Measured on the Richter scale – the strength of n earthquake is called its magnitude

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Homework 1:

1. Describe the differences between the outer core and the crust
2. Describe the differences between the inner core and the mantle
3. Draw out simple diagrams to show what is happening at each plate boundary
4. Find and write examples of each plate boundary – convergent, divergent and conservative

Homework 2:

- Learn the key terms from the sheet you were given in class.
- Practice recalling both the definition and key term.
- Get someone to test you
- Write up 4-6 sentences including the key words

Homework 3:

1. Explain how each of the following things could lead to lots of damage and death
    - Epicentre close to a major city
    - Developing country
    - An earthquake at night-time
    - A very powerful magnitude earthquake
2. Explain why 60,000 people dies in the Turkey earthquake of 2022.

	I can…	Tick
How and why do tectonic plates move?	Name and locate the different sections of the earth – crust, mantle, outer core, inner core	
	Describe and explain how convection currents move the plates around the earth's crust	
	Draw diagrams explaining the three different types of plate boundary – convergent, divergent, conservative	
How do tectonic plates create hazards?	Know which plate movements create earthquakes and volcanoes	
	Outline the meaning of the focus and the epicentre of an earthquake	
	Describe the difference between lava and magma	
	Describe the difference between extinct, dormant and active volcanoes	
	Label the different parts of a volcano	
	Describe how we can use measure the energy of an earthquake - The Richter Scale	
	Describe the different types of hazards a volcano can create – lava, ash clouds, pyroclastic flow	
Why do the impacts of tectonic hazards vary?	Explain why some hazards become disasters – development, power/magnitude/location	
	Explain why a named case study earthquake became a disaster – Turkey, 2023	
	Explain what primary and secondary impacts are	
	Identify primary and secondary impacts	
	Explain the primary and secondary impacts of a named volcano – Montserrat	