Geography: Is the world becoming more hazardous?

Year 9 **Term 1**

Trinity Academy Halifax

What is a hazard?

A natural hazard is an event that has a huge **social impact**.

If the event, e.g. a volcanic eruption, happened in a remote area where there it did not pose any threat to people it would not be considered a hazard.

Hazard risk is the chance or probability of being affected by a natural event e.g. people who chose to live close to a river may be at risk of flooding.

What is risk?

How often does this happen? *What factors might affect vulnerability of different countries?*

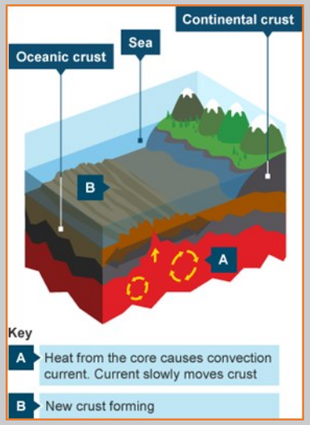
RISK = Frequency or magnitude of hazard / Capacity of population to cope × Level of vulnerability

What factors might affect communities ability to cope with a hazard?

Why do tectonic plates move?

Heat rising and falling inside the mantle creates **convection currents** generated by radioactive decay in the core. The convection currents move the plates. Where convection currents diverge near the Earth's curst, plates move apart. Where they converge, plates move together. This is called **plate tectonics**.

Plate tectonics are what case earthquakes and volcanoes. They are most likely to occur along or near plate boundaries.



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Trinity TV > Year 9 > Geography > Term 1 > Is the world becoming more hazardous?

Key Terms

Risk	The probability of a hazard causing harmful consequences (expected losses in terms of death, injuries, property damage, economy and the environment).
Convection currents	Heat created in the core by radioactive decay causes magma to rise (as hot elements rise), this cools as it reaches the surface - this movement causes the plates to move.
Shield volcano	This is a volcano that has a gentle slope and a non-violent eruption. It has steep sides and is often found on a destructive plate margin.
Composite Volcano	This is a volcano with a more violent eruption. It has steep sides and is often found on a destructive plate margin.
Vulnerability	The ability to cope with, resist, and recover from a natural disaster.
Resilience	The ability of places to be able to cope after an event occurs e.g. earthquake.
Destructive plate margin	Plates move towards each other. The denser oceanic plate subducts under the less dense continental plate. The oceanic plate melts as it is heated and magma will break through any weaknesses in the crust, causing a volcano. The build up of friction leads to an earthquake.
Constructive plate margin	Plates move away from each other. Magma fills the gap created and cools in layers to create volcanoes. Friction created by the moving plates leads to earthquakes.
Conservative plate margin	Plates move side-by-side in the same direction at different speeds, or in opposite directions. Plates snag on each other as they move, leading to a build up of friction which can be releases as an earthquake.
Tropical storm	A very intense low pressure wind system, forming over tropical oceans with winds of up to 174mph.
Latent Heat	Heat required to convert a solid into a liquid or vapour, or a liquid into a vapour, without a change of temperature.
Impacts	These are the issues that are created as a direct result of natural hazards e.g. homelessness.
Response	These are what are done to deal with the impacts in the short and long term after a hazard event.

How do tropical storms form?

1. Over warm tropical seas the sun heats the ocean. This causes the air above to rise rapidly which draws up lots of water vapour.
2. The water vapour cools and condenses to form towering cumulonimbus clouds. Small thunderstorms join together to form a giant one.
3. The rising air starts to spin. In the centre of the storm, the eye, it is calm.
4. The rapidly rising air creates an area of intense low pressure. The low pressure sucks in air, causing very strong winds.
5. When the storm moves over land it starts to lose energy and fades.

Case Study: Mount Nyriagongo - January 2002, Democratic Republic of Congo, Africa.

Impacts:	**Responses:**
• 100 deaths. • 12,500 homes destroyed. • Cholera spread. • People lost businesses and jobs.	• 400,000 evacuated. • Refugee camps built. • $35 million of international aid given.

Case Study: Mount Nyriagongo - May 2021, Democratic Republic of Congo, Africa

Impacts:	**Responses:**
• 32 deaths. • 1000 homes destroyed.	• 400,000 evacuated. • 8,000 people fled to Rwanda.

Case Study: Hurricane Sandy

Impacts:	**Responses:**
• 286 deaths. • 8.5 million homes left without power. • $71 billion damage.	• Police evacuated hundreds of thousands of people most at risk of flooding in low lying coastal areas. • $2.2 million of aid given to hardest hit areas.

A multi-hazard zone: The Philippines experiences more than one natural hazard due to its location.

- It experiences tropical storms due to its position near the equator.
- It experiences earthquakes and volcanoes due to its position at the plate margin of the Eurasian and Pacific plates. This is a destructive margin.