

## Risky World Subject Knowledge Organiser :

Focuses on our natural world and its RISKY nature the different types of hazards, and how humans can mitigate and adapt to the risk of them.



### Contextual World Knowledge

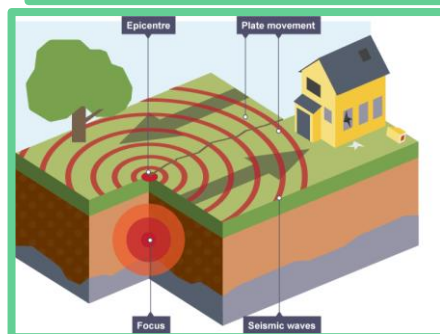
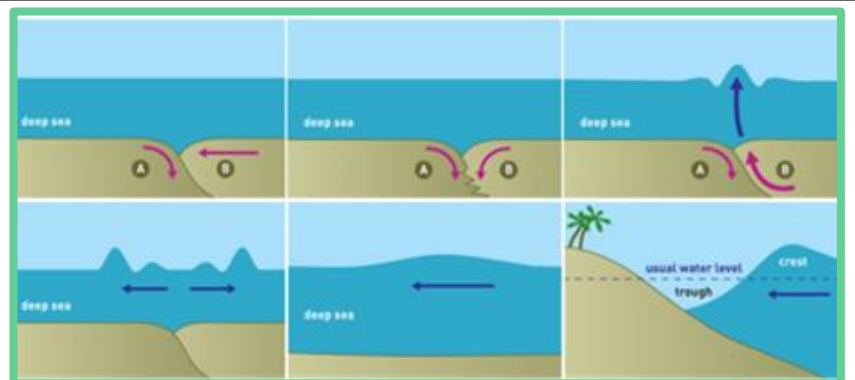
Quality of life and life expectancy vary across the globe as a result of a number of risks. These hazards can be divided into natural disasters (e.g. tropical storms and earthquakes), man-made dangers (e.g. war and crime) and disease, which are often spread by a combination of physical conditions and human actions. The exact impact each of these risks have on a population depends on the country in which they live, with HICs generally able to 'protect' their populations from the worst risks. Tectonic hazards (earthquakes and volcanoes) are caused by the movement of crustal plates. The crust is the thin rocky outer skin of the planet; it is not in one piece but is broken into numerous slabs of varying sizes, known as plates. These plates float on the molten mantle. Heat from the centre of the earth (core) creates huge convection currents which push and tug on the plates above causing them to move. Most plates move only a few millimetres each year. Plate movements are rarely smooth. Pressure builds along the boundary until it is released in sudden movements, known as earthquakes. It is estimated that there are over 150 000 earth movements each year, however, most of these are so weak they can only be recorded using seismographs. Approximately 20 to 50 earthquakes a year are powerful enough to cause serious damage and loss of life. Although scientists have yet to accurately predict an earthquake, our understanding of the hazard has enabled HICs to introduce a range of preventive measures aimed at limiting damage and death when earthquakes occur. Building regulations in California and Japan (two regions frequently affected by earthquakes) have led to the construction of so-called earthquake proof buildings which have been designed to survive tremors by bouncing on shock-absorbers or swaying 'in-time' with the quake. A Tsunami is a giant wave, or series of large waves, created by underwater seismic activity and/or submarine landslides. Tsunamis are relatively unusual as the creating earthquake has to be both powerful and shallow to displace a large enough body of water.

### Geographical Vocabulary

- Risk**- a situation involving exposure to danger, harm or loss.
- Primary effects** - The direct impacts of a hazardous event that usually happen in the short term.
- Secondary effects**- An action or event that was caused indirectly by another, primary effect.
- Immediate responses** - reaction of people as the disaster happens and in the immediate aftermath
- Long-term responses** - later reactions that occur in the weeks, months and years after the event.
- Prediction** – trying to forecast when a hazard is going to occur.
- Protection** – constructing infrastructure so that they are safe, to an appropriate standard and using designs to withstand hazardous conditions
- Preparation** – organising drills and codes of practice so that people know what to do in case of a hazard e.g. hospitals, emergency services and inhabitants practising for major disasters.
- Tsunami**- A large wave or series of waves caused by an earthquake in a sea which displaces the water above.
- Earthquake**- The sudden release of energy through the Earth's crust caused by plate movement which causes seismic waves of different magnitudes
- Volcano**- A mountain or hill created by the eruption and deposition of lava, rock fragments, vapour, gas and ashes from the Earth's crust through a vent in the ground.
- Tectonics**- The structure and the movement of the earths crust
- HIC**- High income Country (\$12,695 PPPA) e.g. UK, USA
- LIC**- Low income country (Less than \$1046 PPPA) e.g. Chad, Ethiopia

### Geographical Understanding

The earthquake happened in the Indian Ocean, approximately 175 miles west of the Indonesian island of Sumatra. The focus (point where the earthquake starts) was very shallow, only 30 km below the sea bed. It measured 9.0 on the richter scale making it one of the strongest tremors every recorded. The earthquake lasted for between 3 to 4 minutes, lifting the sea floor by several metres. The power released has been calculated to be equal to 23,000 atomic bombs. The earthquake created a Tsunami, a series of giant waves which quickly moved towards the eastern and western edges of the Indian Ocean. In parts of Indonesia, Thailand and Sri Lanka the level of destruction was extreme, the waves destroyed coastal settlements and left tens of thousands missing or dead, the final death toll surpassing 150,000. The response to the disaster around the world was swift. Countries, mainly MEDCs, quickly pledged funds to help finance the rescue and repair programmes – Britain pledged a sizable donation of \$285 million. As well as money many countries provided medical and military support, such as medicine, helicopters, and specialist staff. In affected areas, aid organisations set up shelters for the homeless and temporary field hospitals.



### Skills and Enquiry

You need to be able to:

Understand and make Inferences from photos

Describe using data from a graph

(Think about the GCSE Technique G – General Trend / C – Changes to the trend / S – Specific Data / E – Exceptions to the trend)

Analyse line graphs

Recognise physical and human features on maps

Draw conclusions from data

Understand and know how to use median, mean, range.

Be able to judge how Earthquakes could be considered risky.

### The St Benet Biscop Geographer

At SBB we want you to develop geographical enquiry further by asking perceptive questions, thinking critically, weighing evidence and developing a perspective or judgment.

As SBB Geographers you need to be aware of the impacts of your daily decisions and choices on both people and the environment. You will relate this to Earthquakes in a range of places. This will enrich your knowledge of the global community, your place in the world and the privilege of living in a less risky place. You will be able to connect with victims showing empathy and care for their situations.