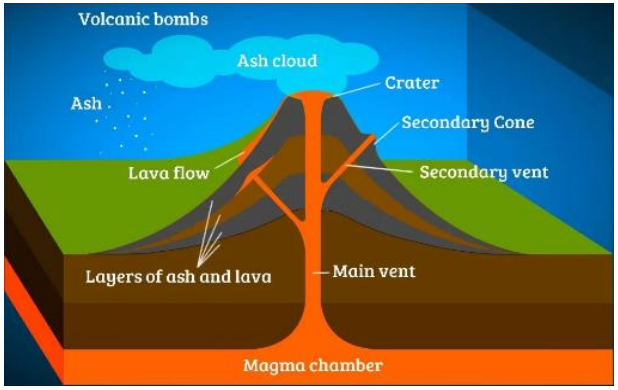


Extreme Earth
Mountains, Earthquakes, Volcanoes & the Antarctic
Year 6 Autumn Term 2021

Big Ideas

Climate and weather

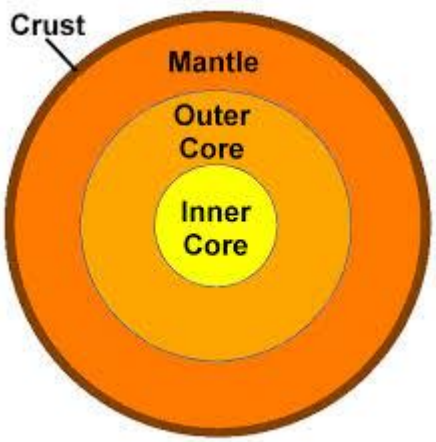
Our world is made up of Physical features

What I should already know:

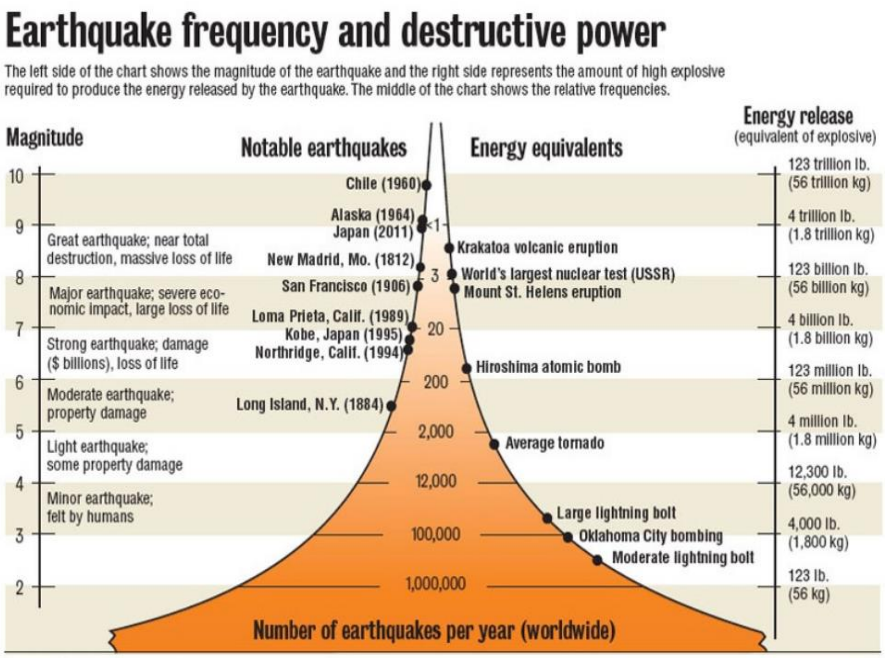
- The locations of the UK, Europe and South America (Yr. 3,4&5)
- The geography of the Amazonian rainforest (Yr. 5)
- The Earth has different climatic zones (Yr. 5)
- Trade of foodstuffs depends on which crops can grow where (Yr. 5)
- Rocks are formed in different ways (Yr. 4)

1. The Earth is 4.5 billion years old. **Pangaea** was the single continent, which over time broke up into the continents we have today. The Earth's surface is continually changing.	2. Ways we measure and describe the Earth include - latitude, longitude equator, hemisphere and tropics.	3. The layers of the Earth are the **crust**, the **mantle**, the **outer core** and the **inner core**. The Earth's surface is made up of huge pieces of flat rock called **tectonic plates.**	4. Volcanoes occur on weak spots on the Earth's surface where magma can break through; often these are on or near places where **tectonic plates** meet or part.
5. One area where there is a particularly high concentration of volcanoes is around the Pacific plate – the Pacific **'Ring of Fire'**	6. There are advantages and disadvantages to living near a volcano. Volcanic activity can cause global impacts (Iceland 2010).	7. Volcanoes can be: Active –a volcano that has had at least one eruption during the past 10,000 years. Dormant – an active volcano that has not erupted for a while Extinct – will not erupt again It is not easy to know if a volcano is dormant or extinct.	8. Earthquakes are most common at the edges of tectonic plates. This makes it easier to predict where they will occur, but it is harder to predict when they will occur.
9. When the **epicentre** of an earthquake is located in the sea, this can cause a tidal wave or **tsunami** (Japan 2011).	10. People show great courage in the face of adversity and have adapted to living in earthquake zones: Monitoring centres Building construction Earthquake drills Trained rescue teams with specialist equipment	11. **Ernest Shackleton** (1874 – 1922) was an Antarctic explorer.	12. The Antarctic environment needs management to make good past damage and reduce current and future human impact.

Key Vocabulary:	
tectonic plates	Large, slow-moving pieces of rock, which make up the outer layer of Earth. All of the Earth's land and water 'sit' on these plates of rock
eruption	A release of pressure that has built up inside the Earth, resulting in a volcano ejecting lava and ash.
earthquake	Shaking and vibration of the ground due to movement of the Earth's tectonic plates.
mantle	The layer of the Earth between the crust and the core.
Mount Vesuvius	A volcano in Italy, famous for destroying Roman towns in 79CE.
pyroclastic flow	A fast-moving current of hot steam, ash, rock and dust.
volcano	A mountain or hill through which lava, rock fragments and gas erupt from the Earth's crust.
glacier	A huge mass of dense ice that moves slowly over land.
ozone layer	A thin part of Earth's atmosphere that absorbs almost all of the sun's harmful ultraviolet light.
aftershock	Small tremors, which occur after an earthquake.
epicentre	The point on the Earth's surface that is directly above the focus of an earthquake.
tsunami	A large sea wave caused by the displacement of a large volume of water. They can be caused by earthquakes.
magma	Molten rocks beneath the Earth's surface.



Structure of the Earth



The Moment Magnitude Scale – The way scientists measure earthquakes

(The Richter Scale was a comparative scale, the MMS is an absolute measurement.)