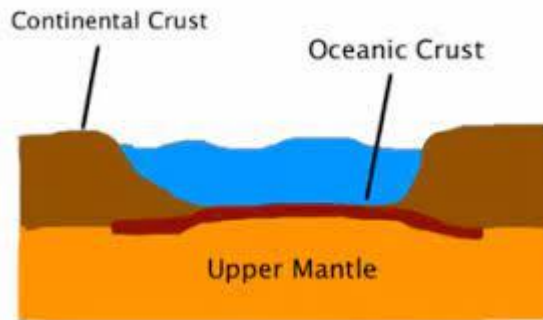
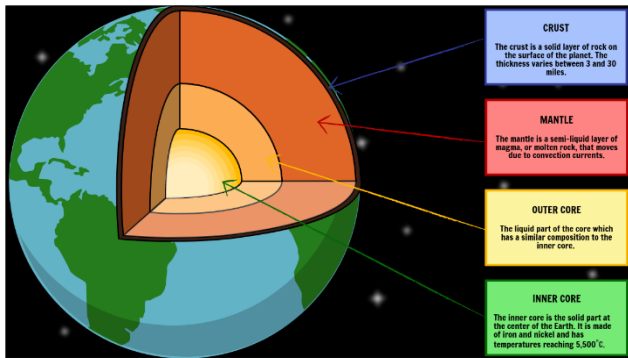


Extreme Environments – Hot Volcanoes

To be able to define: inner core, outer core, mantle, crust, oceanic crust and continental crust.

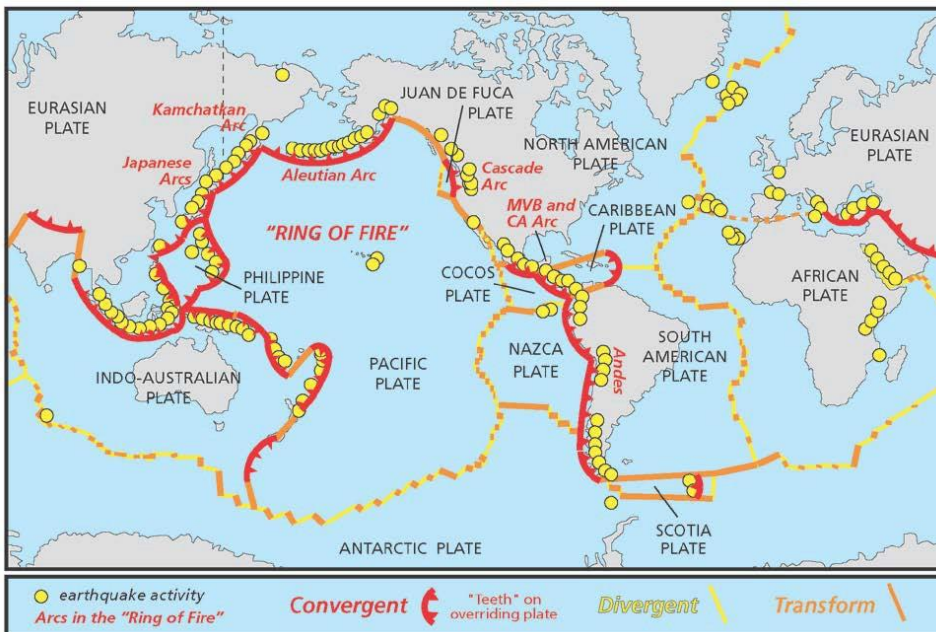
To be able to organise the layers of the earth.

To know that the earth gets hotter towards the core



Create your own at Storyboard That

To know we get tectonic activity due to the movement of the plates at plate margins



To be able to give a basic sequence for the formation of volcanoes using 3 key terms.

Oceanic crust moves towards continental crust and subducts (sinks) because it is heavy. It melts in the mantle giving off gasses. When too many gasses are given off pressure builds up and erupts out the earth as a volcano.

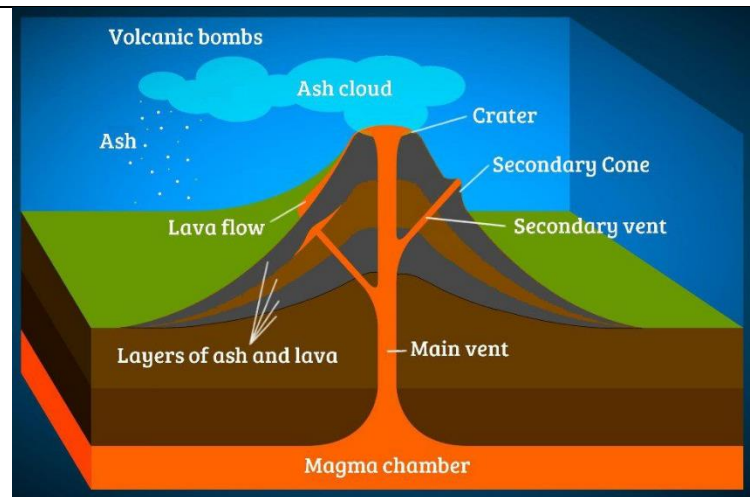
To be able to define subduction

When oceanic crust sinks under continental crust because it is heavier

To be able to define active, dormant, extinct

Will erupt again, unlikely to erupt again, won't erupt again.

To be able to label the parts of a volcano (review)



To know there are two different types of volcano

Shield volcanoes are wide and flat with runny lava.

Composite cone volcanoes are cone shaped with layers of lava and ash.

To know two volcanic hazards

Pyroclastic flow, lava, lahars, ash

To understand prediction is difficult

It can be hard to predict exactly when a volcano will erupt.

To know two ways, we can protect ourselves from an eruption.

Evacuation, gas masks and long sleeves, stay inside unless you need to evacuate.

To describe where Mt Etna is located on a map (review)



To know one of each of the social, economic, environmental impacts of the eruption of Mt Etna

Schools were shut down, the airport was closed, few tourists visited, a huge ash cloud was released

To be able to define geothermal energy

Geothermal energy is heat from the earth's crust. Water and/or steam carry the geothermal energy to the Earth's surface.

To know two costs and two benefits of living on a volcano.

Ash, lava, pyroclastic flow but fertile land, popular with tourists, geothermal energy

To be able to locate volcanic landscapes on a map of the UK (review)



To be able to write directions between three landscapes (review)

To know 2 ways a super volcano is different from a regular volcano.

Super volcanoes are much bigger in both size and explosivity. They form a caldera, a dip rather than a cone shape.

To be able to sequence the cause of a super volcanic eruption.

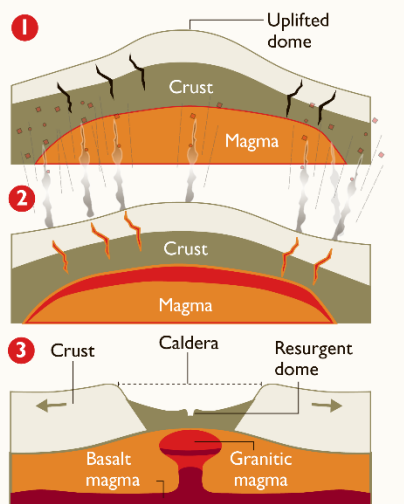
How a super-volcano forms

Super-volcanoes are much larger than normal volcanoes and produce a volcanic eruption thousands of times greater

1 Rising magma cannot escape and a large bulge appears on surface

2 Cracks appear in surface. Gas and ash erupt from chamber

3 Chamber collapses forming a depression called a caldera (a normal volcano forms a cone shape)



To know that a super volcanic eruption would have global impacts.

To know one of each of the local, national and international impacts of a super volcanic eruption

If a supervolcano was to erupt there would be a global catastrophe.

It would kill around 100,000 people instantly and make most of North America uninhabitable as huge amounts of ash and dust would be thrown into the atmosphere.

It would spark climate change that might trigger a mini-ice age due to the amount of sulphur dioxide thrown into the atmosphere and reflecting solar radiation.