Y6 Geography — We are Volcanologists (Mountains & Volcanoes)

Key Knowledge

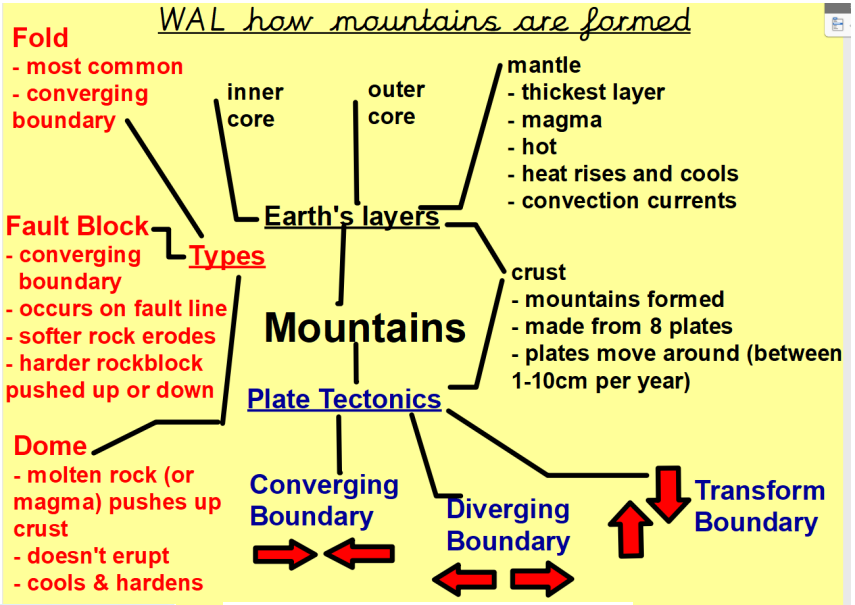
What I Should Already Know

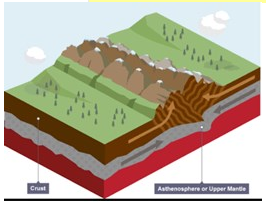
- Continents and oceans (KS1)
- Mountains (year 6)

What do Geologists do?

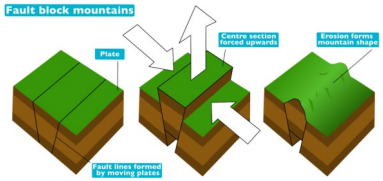
Volcanologists are Geologists who study the formation of volcanoes. They frequently visit volcanoes, sometimes active ones, to observe and monitor volcanic eruptions, collect eruptive products including ash or pumice, rock and lava samples.

Plate Tectonics & Mountains

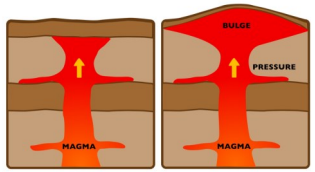




Fold Mountain



Fault Block Mountain



Dome Mountain

Key Vocabulary

Word	Definition
volcano	A deep hole in the Earth's Crust that allows magma, hot ash and gases to escape
Composite	A cone-shaped volcano that is made of ash and cooled lava
Shield	A raised shield shape volcano
Fold	Type of mountain which is formed when two tectonic plates converge where the crust folds.
Fault Block	Type of mountain which is formed two tectonic plates converge along a fault line, where a block is pushed up or downwards
Dome	Type of mountain where the magma has pushed the earth's crust creating a dome like structure on the surface.
Magma Chamber	Large area deep underground filled magma (molten rock)
Vent	Opening in the top or side of a volcano where lava eruptes
Pyroclastic flow	Very hot mixture of lava and ash that erupts with great force and speed
Volcanic ash	Tiny pieces of material that are ejected in a pyroclastic explosion
Crater	Identation at the top of a volcano
Lava	Magma that reaches the Earth's surface
Extinct	A volcano that hasn't erupted recently and is not expected to erupt again
Active	A volcano that is erupting or has erupted recently
Destructive	Plate boundaries which causes the melting of the plate leading to earthquakes or volcanic eruptions.
Constructive	Plate boundaries which form new crust
Dormant	Volcano that has not erupted recently but is expected to erupt again
Contour	Lines that connect points of equal height on maps
Tectonic Plates	8 large slabs of land making up the earth's crust.

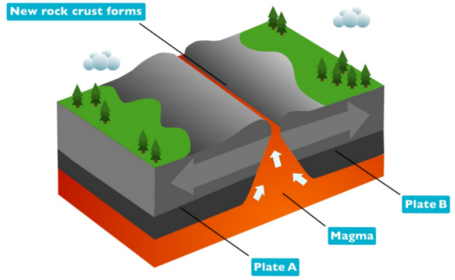
Y6 Geography — We are Volcanologists (Mountains & Volcanoes)

Key Knowledge—Volcanoes

How Volcanoes are Formed

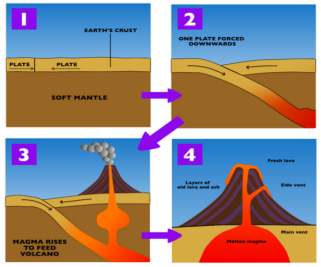
Constructive plate boundaries:

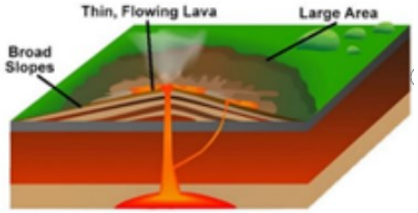
1. Two plates pull apart
2. molten rock (magma) rises
3. erupts as lava.
4. This lava then hardens to form new crust.



Destructive plate boundaries:

1. Two plates can also collide or converge.
2. One plate is pushed under the other.
3. The plate underneath then melts
4. the crust becomes molten rock (magma).
5. This magma then forces its way back to the surface to form a volcano.



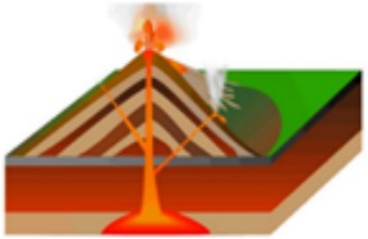


Shield Volcano

Effusive or Explosive Volcanoes

Lava flows easily out from the central vent and form a stack of thin lava layers, which do not build up to be a cone,

Form a wide upside-down dish shape –or shield.



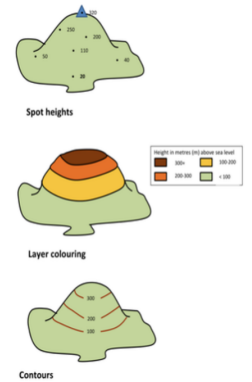
Composite Volcano

Stratovolcanoes or Layered

Lava is thick and sticky (like jam) and cannot flow far.

This means the lava and ash build around the vent to form a cone shape. Inside, the sides are made of layers of lava and ash.

Mapping Mountains



3 ways you can find out the height on a map

Spot heights - These are small dots or sometimes triangles with number beside them giving the height in meters above sea level.

Layer colouring - These are bands or area of colour which with the aid of a key you can find out the height above sea level

Contour lines - These are bands of identical height joined up by lines. These lines have the height in meters above sea level

Use these keywords to complete the definitions above

identical	dots	colour
height	bands	sea

So how do contour lines work?

1) Contour lines connect points of equal height
2) Height is marked on as a number above sea level
3) If you walk across contour lines it means you are going up or down hill
4) The close the contour lines are together, the greater the gradient (steep slope)

Features of Composite Volcano