

# Volcanoes, Mountains and Tectonics Knowledge Planner: Why do people choose to settle near volcanoes?

## Key Idea

The Earth's crust is made of 6 separate plates known as tectonic plates. These plates float on the molten rock of the mantle meaning they move. At the boundaries of these plates, we find landforms such as mountains and volcanoes. Additionally, the movement of the plates can lead to earthquakes.

## Geographical Concepts

Change	The alteration or modification of places over time as a result of natural and/or human processes.
Distribution	The pattern or arrangement of the physical (mostly natural) and human features of a place across its surface.
Diversity	The variety and distinctiveness of the physical and cultural composition of the society of a place.
Environment	The surroundings of a place in which a person, animal or plant lives and interacts.
Interaction	How the physical and human elements of a place affect or impact each other and other places. Interaction occurs both within and between the physical and human features of a place and other places.
Interdependence	The degree to which what happens in one place impacts positively or negatively on what happens in another.
Location	The precise site, position, or situation of a place.
Processes	The natural or human events and actions occurring in a place that maintain equilibrium or cause change.
Scale	The size or extent of the area of the place e.g. local, regional, national, international, or global
Sustainability	The extent to which a place can balance meeting the needs of its people with ensuring an ecological equilibrium is maintained and biodiversity (the variety of living things) enhanced.

## Key Vocabulary

Mantle	A layer of the earth formed of molten rock.
Magma	The name given to molten rock in the Earth's mantle.
Summit	The very top of a mountain.
Base	The bottom of a mountain.
Tectonic plates	The 6 huge land masses that make up the Earth's crust.
Tourism	Is the movement of people to countries and places outside of their usual environment often for leisure purposes.
Ring of fire	An area of the Pacific Ocean where there are a large number of earthquakes and volcanoes.
Vulcan	The name of the Roman God of fire and the origin for the name volcano.
Lava	The name given to molten rock when it erupts onto the Earth's surface.
Noxious gases	Toxic gases that are harmful to living things.
Mountain range	A collection of mountains that are joined along the same tectonic boundary.
Developing countries	Countries that do not have a lot of money and are less developed.
Landscape	All the visible features of an area of land.

## World Map:



## Human Geography

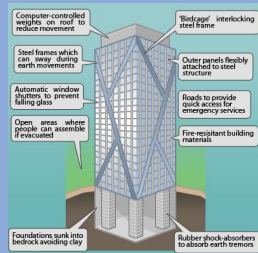
### Tourism

Tourism is one of the main reasons that many mountains are visited. The beautiful scenery, sporting opportunities and wildlife spotting are some of the most common reasons for them being popular destinations. We need to consider how mountain tourism affects those that live within the mountains and the environment.

### The impact of natural disasters on people

Earthquakes:

- Injury/death
- People left homeless and belongings are lost
- Lack of clean water and food supply
- Disease spreading through makeshift camps
- Buildings need additional features to withstand the earthquakes



Volcanoes:

- Injury/death
- People left homeless and belongings are lost
- Lack of clean water and food supply due to the ash polluting water sources

There are also benefits to living near a volcano which include:

- Fertile land from the volcanic ash deposits means bumper crops can be grown
- Volcanic nutrients used cosmetically to make people look healthier and younger
- Opportunity for geothermal farming due to the geothermal energy from the volcano
- Precious metals can be found which means jobs opportunities at the quarries
- Tourism which brings money to the local people

## Physical Geography

### Tectonic plates:

The Earth's crust is not one whole entity and is made up of 6 large slabs that fit together like a jigsaw. We call these tectonic plates and they float on the molten rock of the mantle. This causes them at times, to collide or allow magma to erupt onto the Earth's surface.

### Mountain types:

- Fold – the most common type. Formed when two plates collide and their edges crumble
- Fault-Block – Earth's crust fractures into blocks and some move up while others move down.
- Volcanic – Formed when magma erupts and piles upon the Earth's surface.
- Dome – Formed when magma pushes up overlaying rocks then the magma cools and forms hardened rock.
- Plateau – Formed by erosion. Large flat areas that have been pushed above sea level or formed by layers of lava.

### The impact of natural disasters on the physical environment

Earthquakes:

- Pipes break, causing gas, electricity and water supplies to stop and/or pollute water sources
- If river banks are damaged, flash floods can occur
- Earthquakes can also cause tsunamis

Volcanoes:

- Pollution of water sources by the volcanic ash
- Contributes to global warming
- Habitats and animals killed by lava flow

## Important Places

### The Himalayas (Asia)

The tallest mountain range – over 24,000ft/7315m. Home to Mount Everest (Nepal), the highest mountain on Earth.



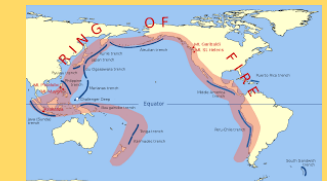
### The Andes (South America)

The longest mountain range 4500miles/7200km



### The Ring of Fire (Pacific Ocean)

452 volcanoes and is home to 75% of the worlds active and dormant volcanoes.



### Armero, Columbia (South America)

A deserted town that lays at the foot of the Nevado del Ruiz volcano. It erupted in 1985, killing 25,000 people.

