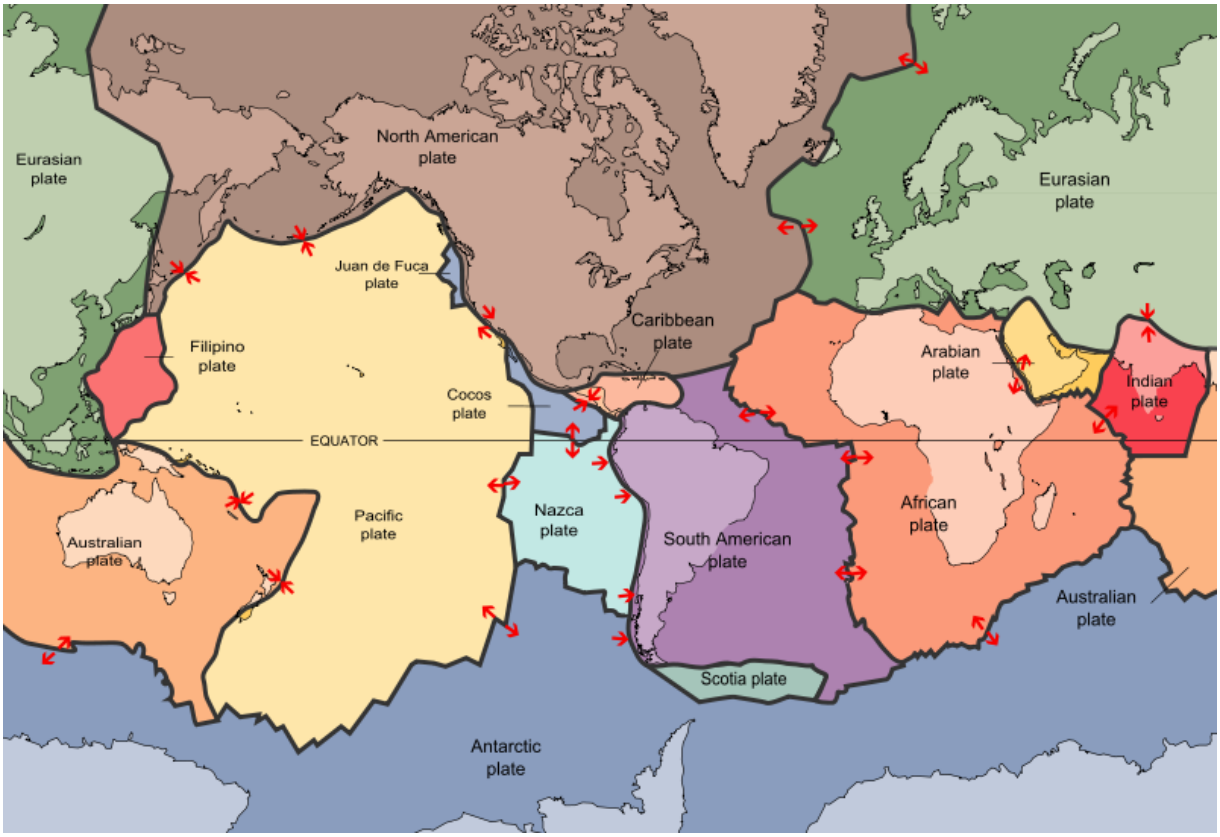
The CRUST is divided into huge slabs called PLATES. Where the plates meet there are three types of plate boundary:

- **Constructive or divergent plate boundaries** where the two plates are moving apart.
- **Conservative or transform plate boundaries** where the plates are sliding past each other.
- **Destructive or collision or convergent plate boundaries** where the plates are moving together.



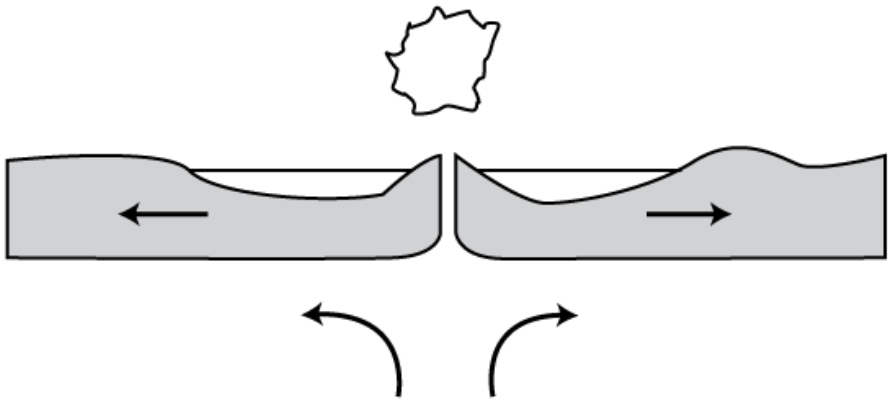
Map used courtesy of the US Geological Survey en.wikipedia.org/wiki/Plate_tectonics#/media/File:Plates_tect2_en.svg

Student tasks

Complete the following statements:

1. The South American and African plates are moving .....
2. The North American and Eurasian plates are moving .....
3. The South American and Nazca plate are moving .....
4. Constructive plate boundaries are where new crust is being made or constructed, so destructive plate boundaries are where the crust .....

Constructive plate boundaries



1. On the diagram above add the following labels:
   - Convection currents
   - PLATES MOVING APART
   - Volcano
   - New land being formed.
   - Mantle
   - CRUST

2. Use the word bank to complete the sentences below:

   Why do volcanoes form at constructive plate boundaries?

   a. Plates are moving ..... due to rising ..... currents.

   b. Magma from the mantle rises through the ..... in the ..... to form a .....

   c. The lava cools to form ..... .

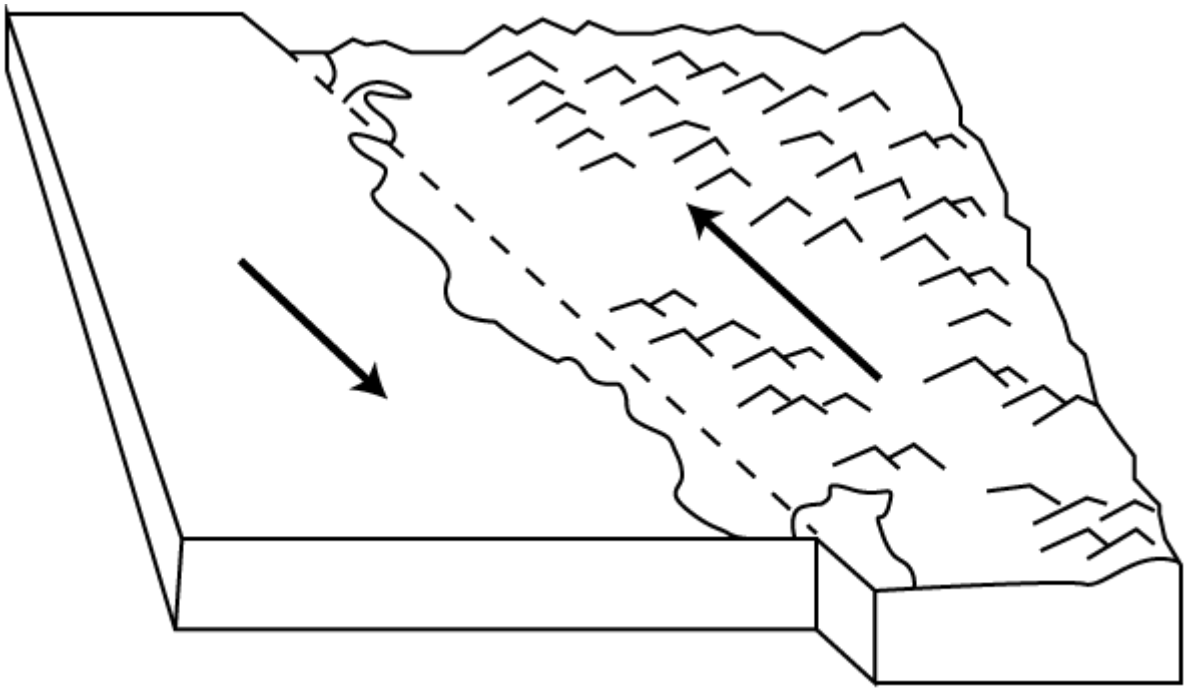
Word bank					
gap	apart	crust	volcano	convection	new land

3. Describe what is happening in this map of Iceland.

4. Explain what is happening in this map of Iceland.

Map used courtesy of the US Geological Survey
pubs.usgs.gov/gip/dynamic/understanding.html

Conservative plate boundaries



Why do we get earthquakes at conservative plate margins?

Circle/highlight or underline the correct word in each pair.

1. The two plates are moving **[parallel with / apart from]** each other.
2. They **[slide past / slide apart]** from each other.
3. Due to friction the plates **[stick/move].**
4. **[Pressure/magma]** builds up.
5. This pressure is released suddenly in a **[jerking/smooth]** movement.
6. This releases **[shock waves / tidal waves]** and an earthquake occurs.
7. These waves can be recorded on a **[barometer/seismometer]**.

GCSE Question

The San Andreas Fault in California lies on a conservative plate margin.

Explain with the help of a diagram how earthquakes are caused at a conservative plate margin.

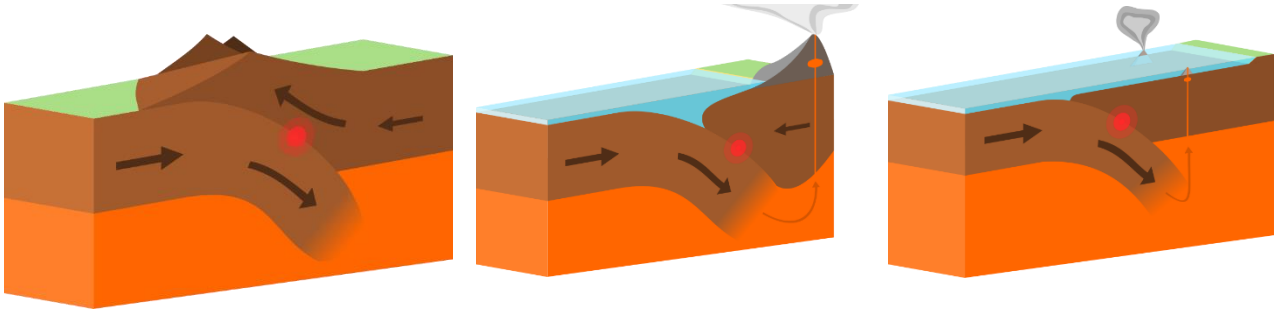
(4 Marks)

Destructive plate boundaries

Destructive or collision or convergent plate boundaries occur where the plates are moving together. There are three possible boundary types:

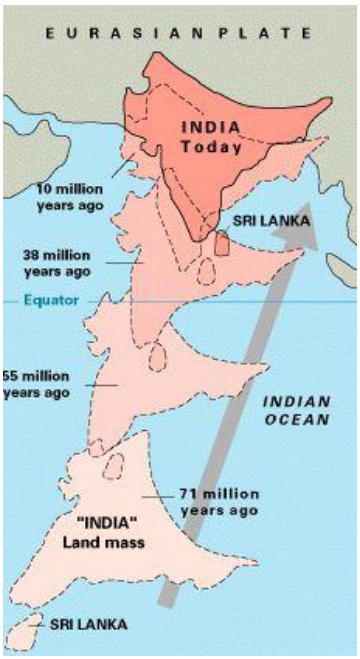
- at a continental to continental plate boundary
- at an oceanic to continental plate boundary or
- at an oceanic plate to oceanic plate boundary.

1. Label the three diagrams below using the three destructive plate boundary types.



2. Are the sentences below true or false?

- When two plates move towards one another, they form a subduction zone or a continental collision.
- Pressure and friction build up at destructive plate boundaries.
- Earthquakes and volcanoes are common near destructive plate boundaries.
- Large fold mountain ranges are formed during collisions between two continental plates.
- The Himalayas were formed by the Indian plate colliding with the Eurasian plate over millions of years.



Map used courtesy of the US Geological Survey
pubs.usgs.gov/gip/dynamic/himalaya.html

GCSE Question

There is a deep ocean trench in the Pacific Ocean, west of South America at the boundary of the Nazca Plate and South American Plates.

Explain the formation of an ocean trench.

(4 Marks)