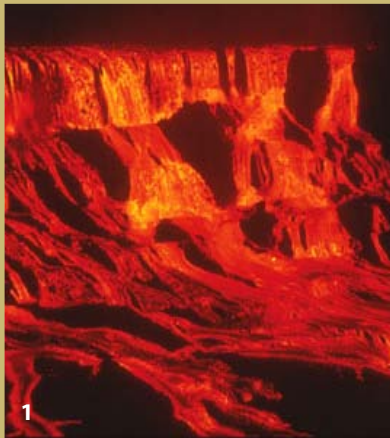


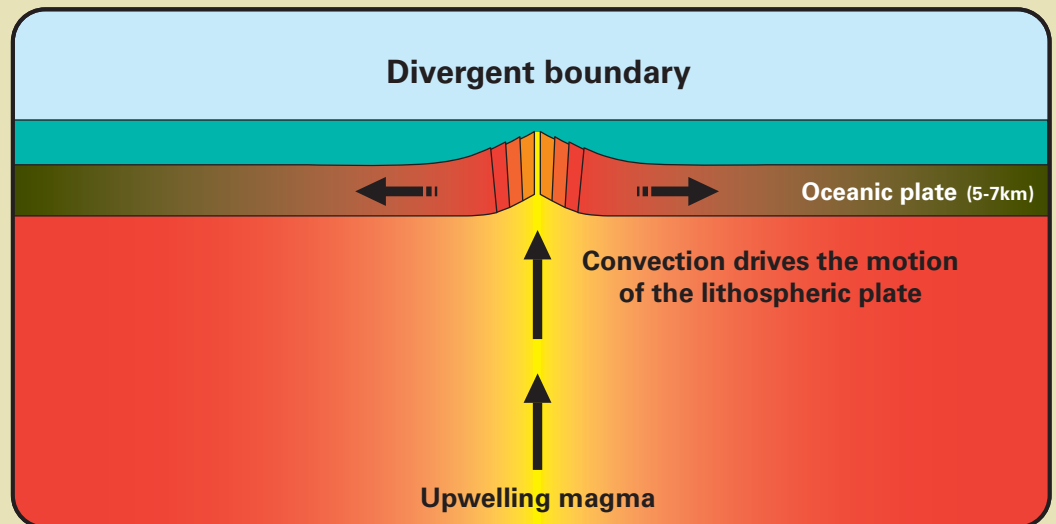
Plate Tectonics factsheet pdf
www.bgs.ac.uk/ask

The outer crust of the Earth is divided into rigid plates. They vary in shape and size and move relative to one another over the globe, at an average speed similar to the growth rate of your fingernail. There are nine major plates: the Eurasian, African, South American, North American, Nazca, Antarctic, Pacific, Juan De Fuca and Indian-Australian.



Most of the edges of these plates are geologically active. There are *three* types of boundaries between plates:

Divergent boundaries occur where plates move away from each other and fresh magma wells up to fill the gap creating new crust as it cools and solidifies.

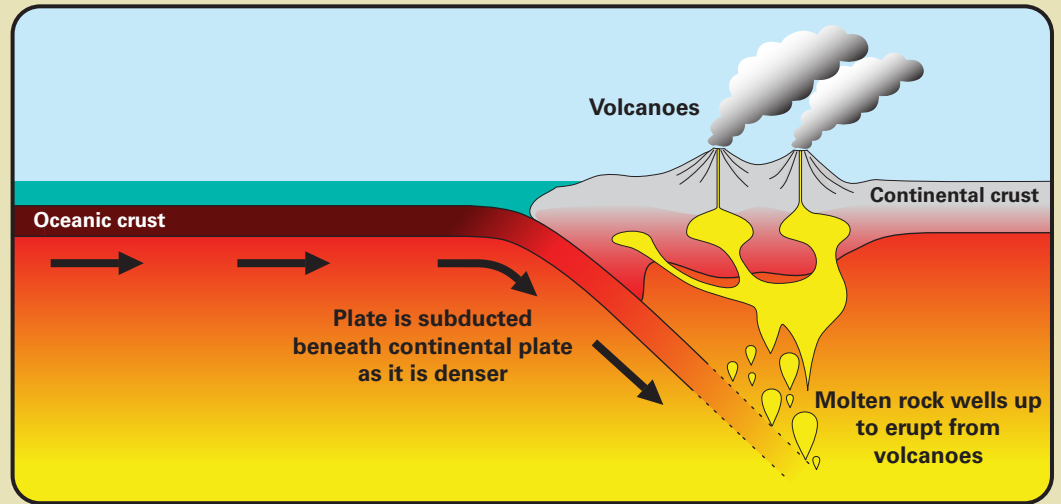


1 Lava cascades, Hawaii Volcanoes National Park, 1969.
 US Geological Survey, Department of the Interior/USGS

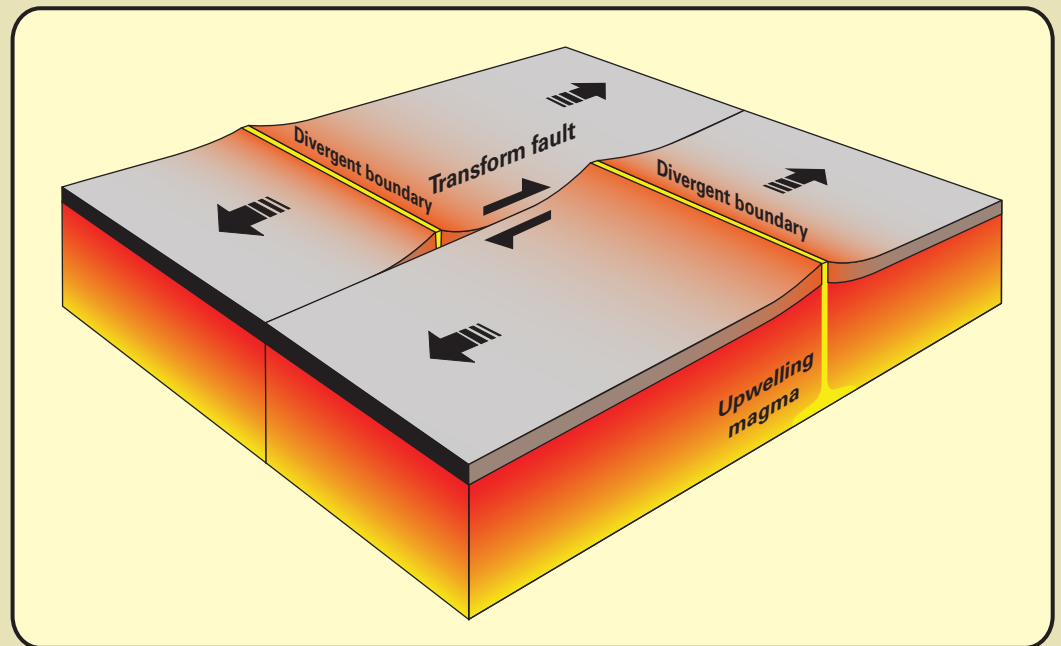
2 San Andreas Fault from Palo Alto to Saratoga, USA, 1980.
 US Geological Survey, Department of the Interior/USGS
 photo by R E Wallace

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Convergent boundaries occur where plates collide and one plate is pushed underneath the other (subducted). Crust is returned to the interior of the Earth and as the old plate sinks the rock melts and erupts as volcanoes at the surface.



Transform fault boundaries, where plates slide past one another. Movement is not smooth but more like a stick-slip process, where sudden slips can cause damaging earthquakes e.g. the San Andreas Fault.



1 San Andreas fault close to Olema, San Francisco, USA, 1906.
 US Geological Survey, Department of the Interior/USGS
 photo by G K Gilbert

2 San Andreas Fault, California.
 A view to the east showing the fault line bisecting the Highway 14 road.
 US Geological Survey, Department of the Interior/USGS
 photo by R E Wallace

For further information:

www.bgs.ac.uk/education/earthquakes.html

www.cotf.edu/ete/modules/mse/earthsysflr/plates1.html