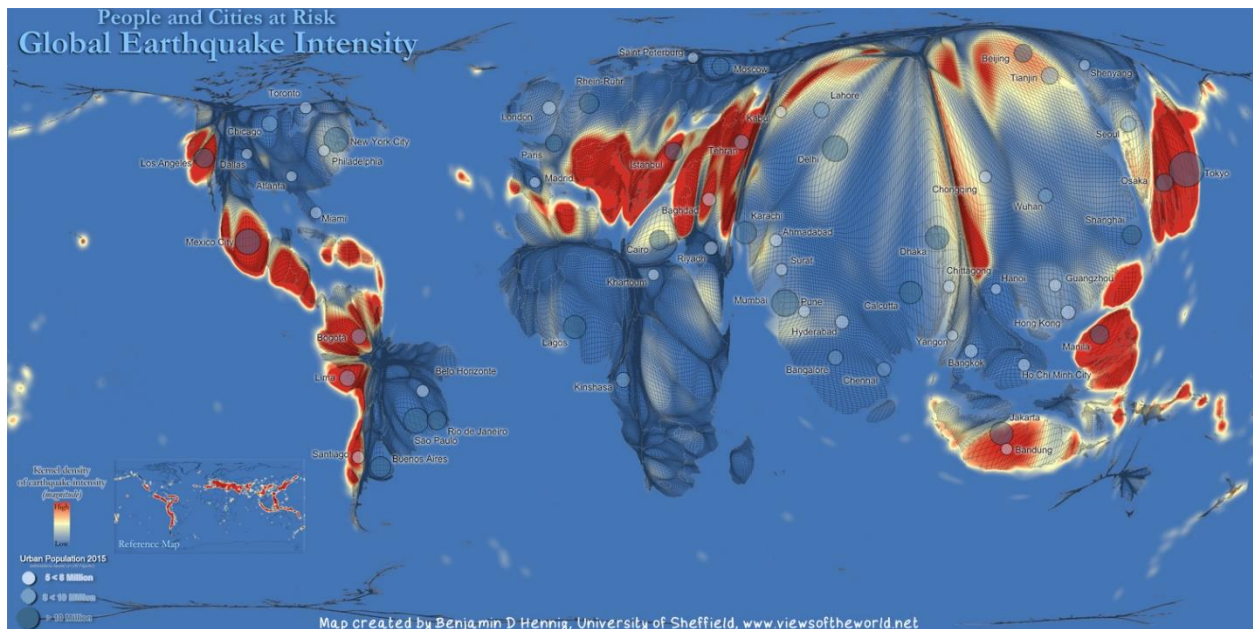


Name here

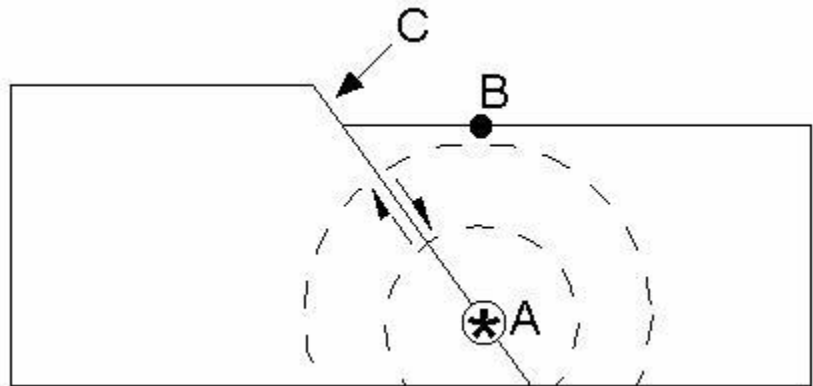
IB DP Geography – Characteristics of Earthquakes

An earthquake is a series of vibrations that emanate from a focal point below the surface of the Earth as tectonic plates experience a sudden release of pressure. Earthquake events are increasingly turning into large scale disasters when you consider ever expanding urban areas locate on or close to plate boundaries. This can be best illustrated using this excellent map produced by Dr Ben Hennig at the University of Sheffield. You can see a larger version on [ibgeographypods](http://ibgeographypods.org).



Focus & Epicentre

It is important to understand the difference between two key Geography terms when discussing the science behind earthquakes. The diagram below shows a cross section through two plates at the point where they meet.



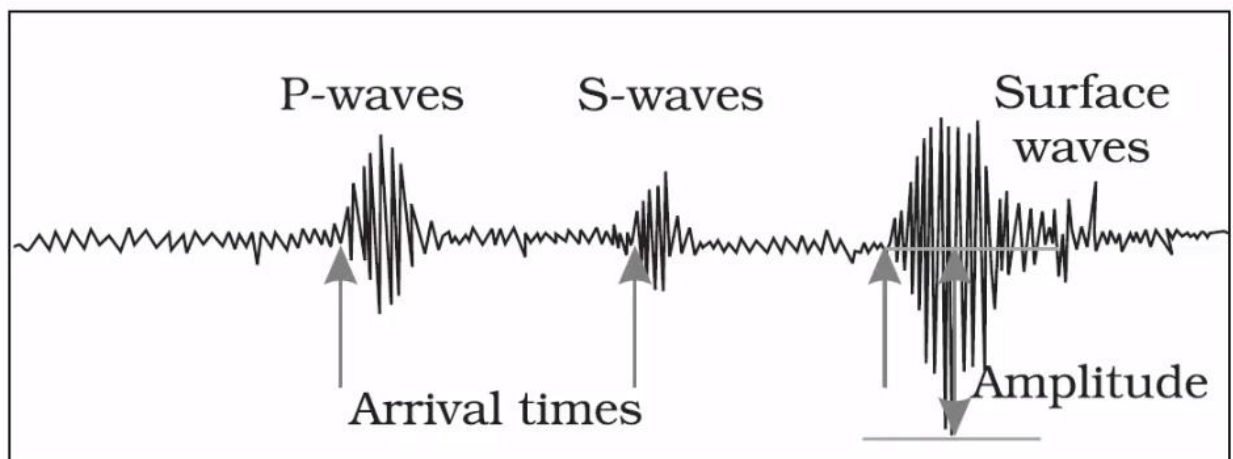
Task 1 - Label the following features onto the diagram above (A,B & C) .

- **Focus.** The point within the plate where the rocks start to fracture. It is the origin of the earthquake.
- Directly above the focus on the Earth's surface is the earthquake **epicenter**.
- **Fault lines** represent fracture lines on the surface of the Earth where tectonic movement occurs.

Name here

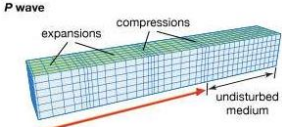
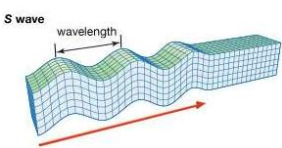
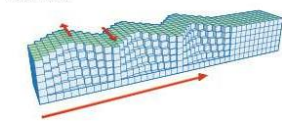
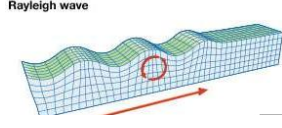
Task 2 – Using the link on ibgeographypods, complete some note taking on the differing depths of the focus of earthquakes using the categories below.			
Category	Depth KM	Characteristics	% of total earthquake energy released.
Shallow			
Intermediate			
Deep			

We are now going to turn our attention to how the shock waves are transferred through the surface of Earth directly after an earthquake. The basic diagram below is your starting point.



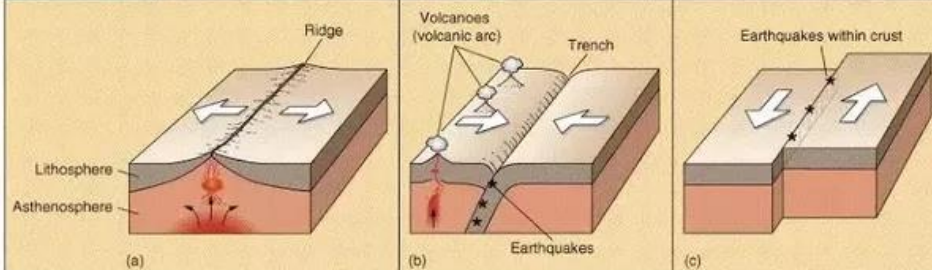
Name here

Task 3 – Now watch the video embedded on [ibgeographypods](http://ibgeographypods.org) and complete the following information gathering exercise. For the detail of Love & Raleigh waves, you will need to use the second weblink available on [ibgeographypods](http://ibgeographypods.org).

<p>Body Waves Describe them here</p>  	<p>P Waves</p>	<p>Describe</p>
<p>Surface Waves Describe them here</p>  	<p>S Waves</p>	<p>Describe</p>
	<p>Love Wave</p>	<p>Describe</p>
	<p>Raleigh Wave</p>	<p>Describe</p>

Images: *Encyclopædia Britannica, Inc.*

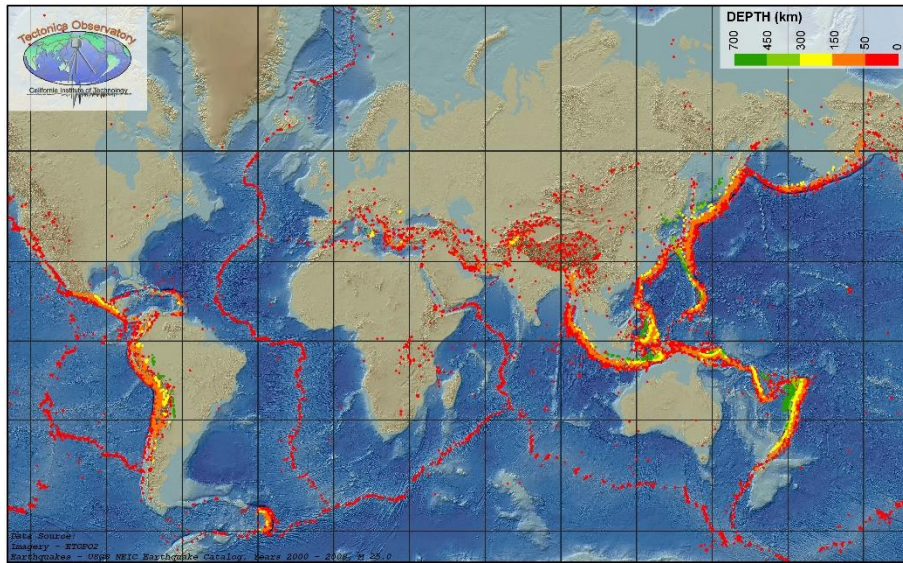
Type of Margin	Divergent	Convergent	Transform
Motion	Spreading	Subduction	Lateral sliding
Effect	Constructive (oceanic lithosphere created)	Destructive (oceanic lithosphere destroyed)	Conservative (lithosphere neither created or destroyed)
Topography	Ridge/Rift	Trench	No major effect
Volcanic activity?	Yes	Yes	No



<http://www.ibgeographypods.org/1-geophysical-systems.html>

Name here

Earthquakes & Plate Boundaries



Task 4 – Using both maps above and below as well as the table on the previous page, create a summary of the relationship between intensity of earthquake activity (depth map) with the type of plate boundary associated with that movement.

Blank area for student response.

