

Fig 1: Global Lithospheric Plates' Relative Motion and Speed

Data Analysis

1. Look at Fig 1: Global Lithospheric Plates' Relative Motion.
2. Determine what type of plate boundary exists between each of the two plates in Table 1.
3. Describe features that may be found at each of the plate boundaries.

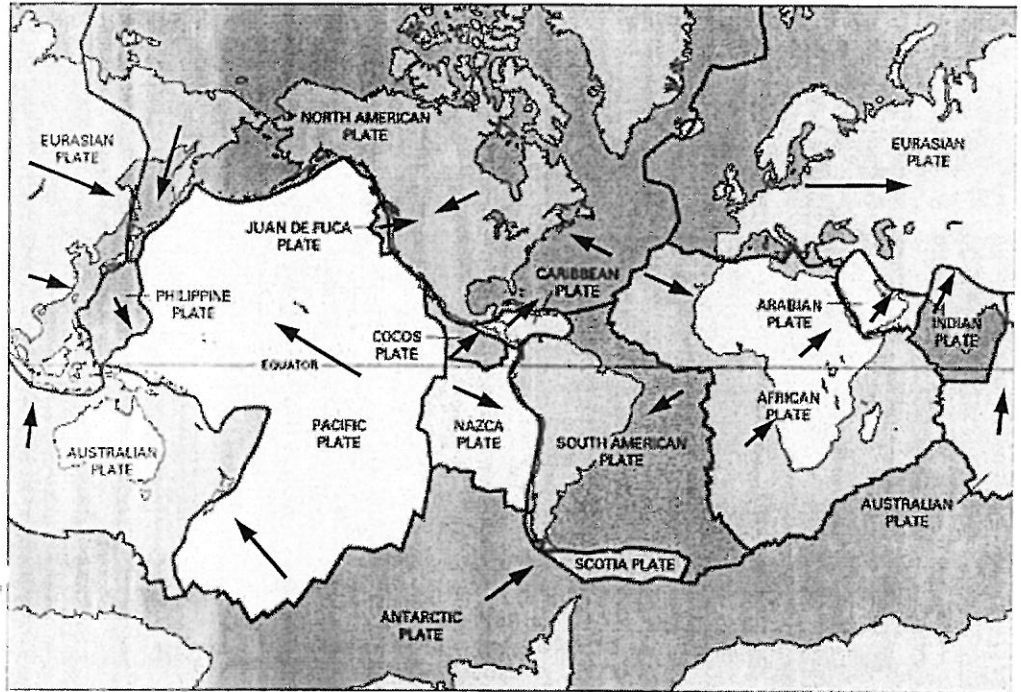


Plate Boundary	Boundary Type	Features
North American Plate and the Pacific Plate near California		
Nazca Plate and the South American Plate		
South American Plate and the African Plate		
Pacific Plate and the Nazca Plate		
Juan DeFuca Plate and the Pacific Plate		
Juan DeFuca Plate and the North American Plate		
Australian Plate and the Eurasian Plate		
North American Plate and the African Plate		
Pacific Plate and the Philippine Plate		
Indian Plate and the Eurasian Plate		

Questions

1. Where does the overwhelming amount of seismic activity occur on the Earth's surface?
2. Explain why the term *recycling* is an excellent description of plate tectonics.
3. Explain how tectonic plate movement could create another supercontinent like Pangaea.
4. If the Earth's core provides the heat that drives plate tectonics, then what will eventually happen as the Earth's core cools down over billions of years?
5. What are the various ways in which lithospheric plates interact with each other as they move around on a dynamic Earth?

solid crust & upper mantle