

# Plate Tectonics

Mr. Skirbst



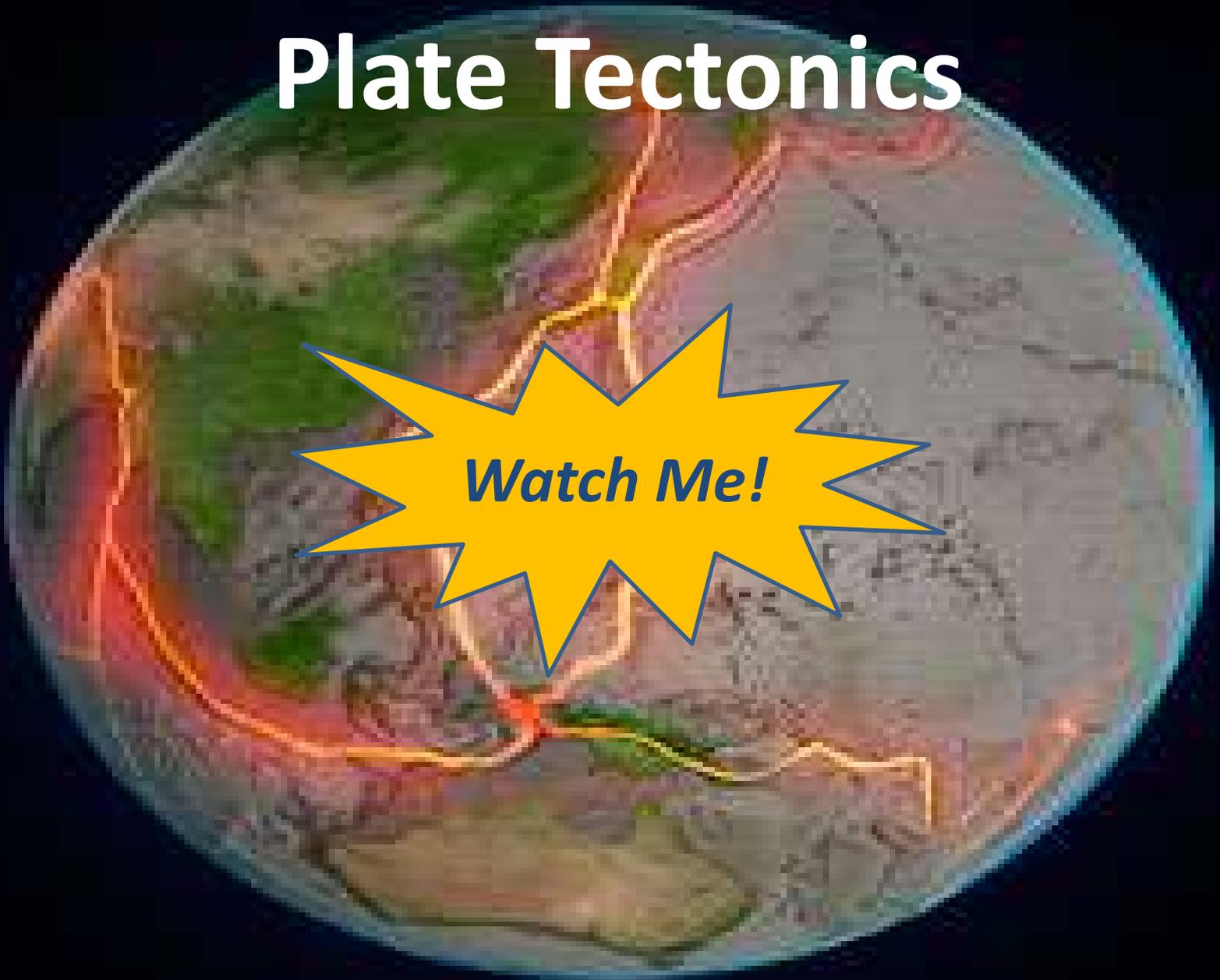
## ***Alfred Lothar Wegener***

November 1, 1880 – November 1930

He was a German geophysicist remembered most for his ***theory of continental drift.***

His theory stated continents are slowly drifting around the Earth and was not accepted at the time.

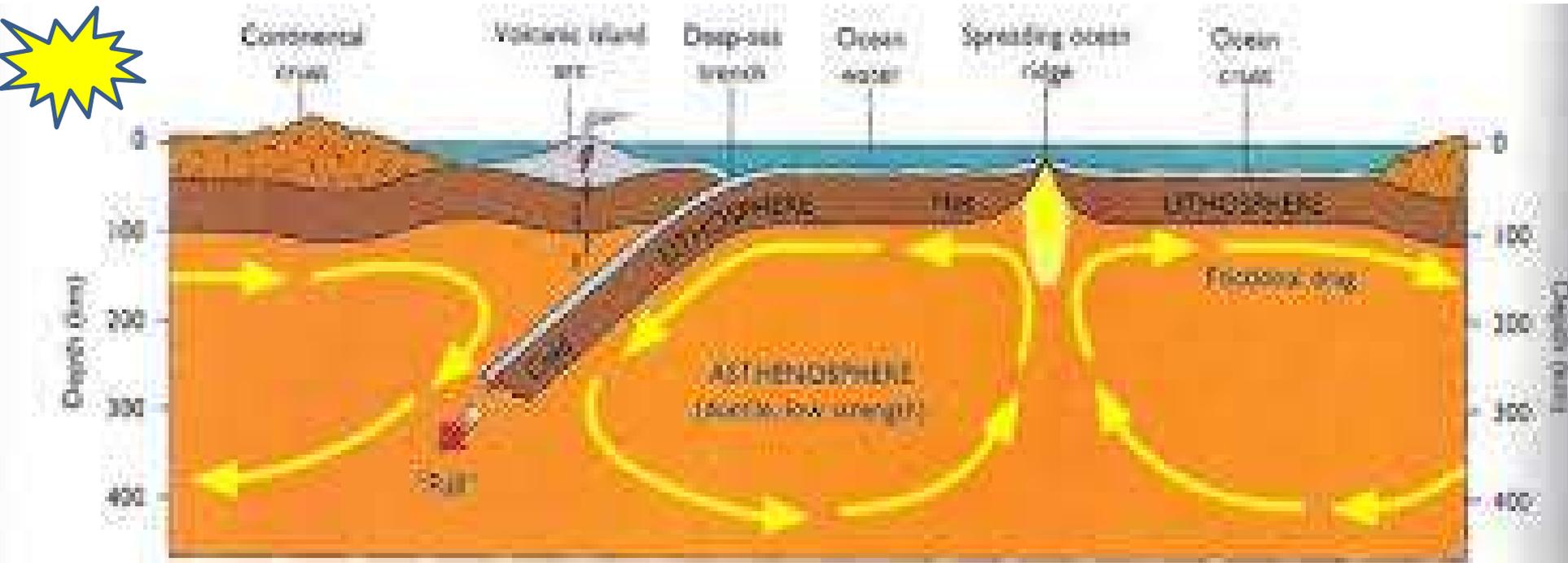
# Plate Tectonics

A globe of the Earth is shown with various tectonic plates outlined in orange and yellow. The plates are labeled with names such as North American, Pacific, African, Eurasian, Antarctic, Australian, Indian, South American, and Nazca. A prominent yellow starburst with a blue outline is centered on the globe, containing the text "Watch Me!".

*Watch Me!*

# Plate Tectonics:

*- movement of rocky slabs  
across the Earth*

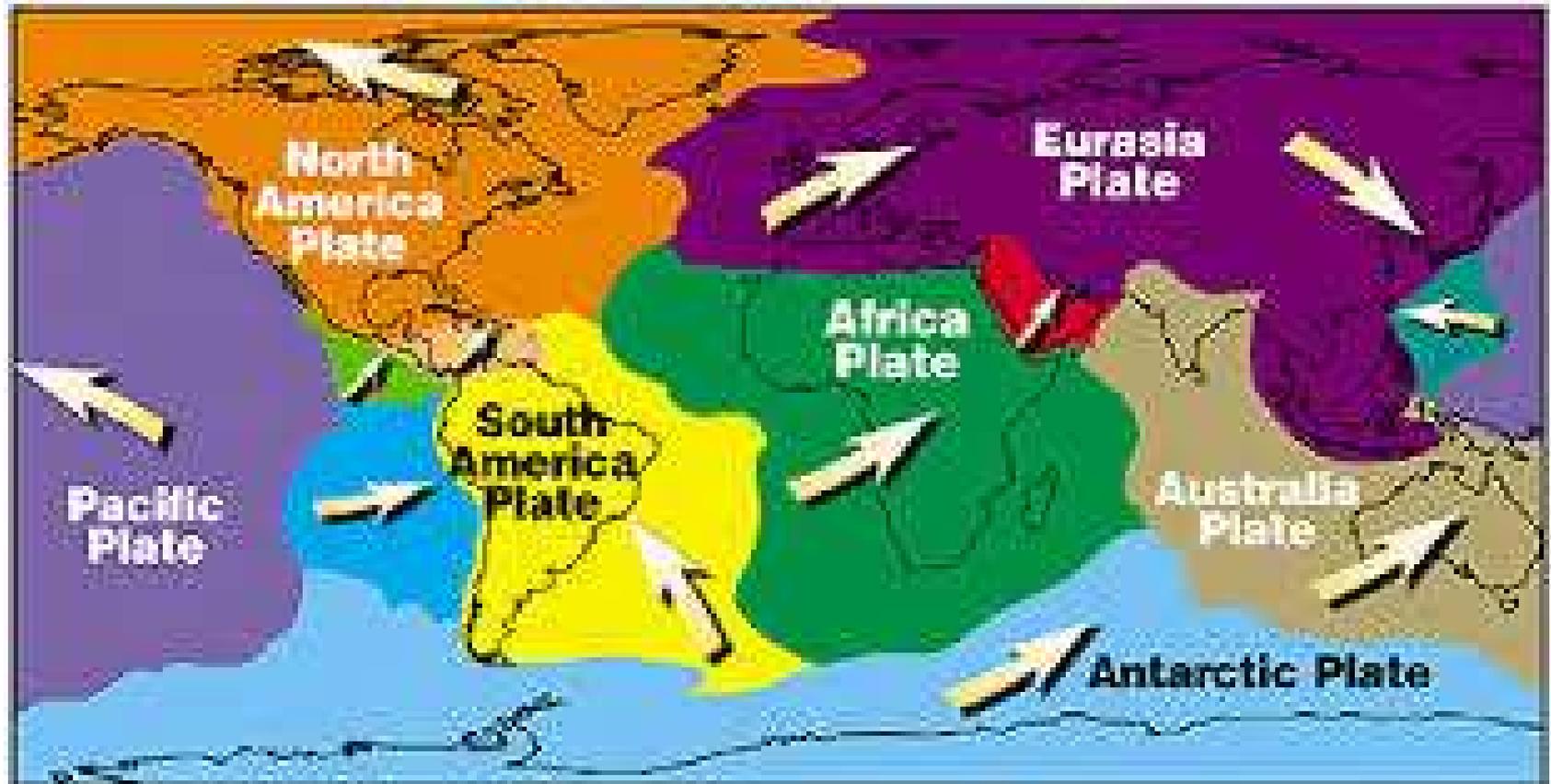


# ***lithospheric plates – “rock slabs”***



**lithospheric plates – “rock slabs”**

***tectonics – “movement”***



# Continental Drift -

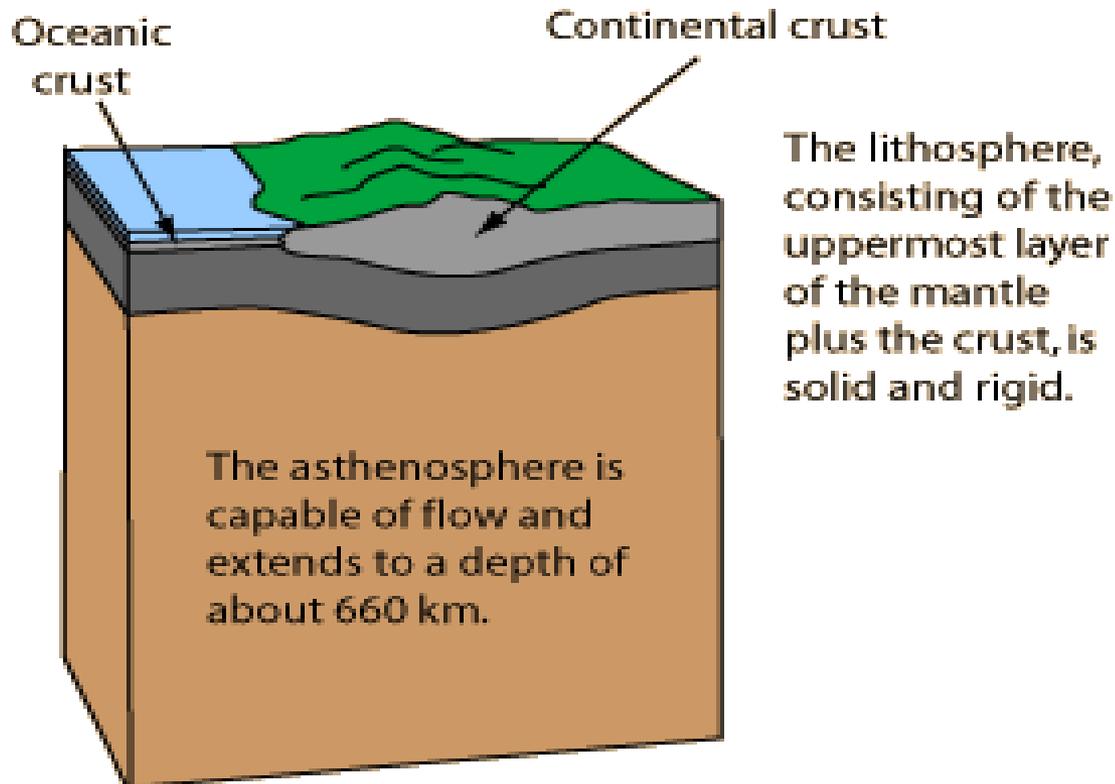
*Theory proposed by*

*Alfred Wegener*



# Continental Drift:

*Earth's continents are "floating" from one place to another*



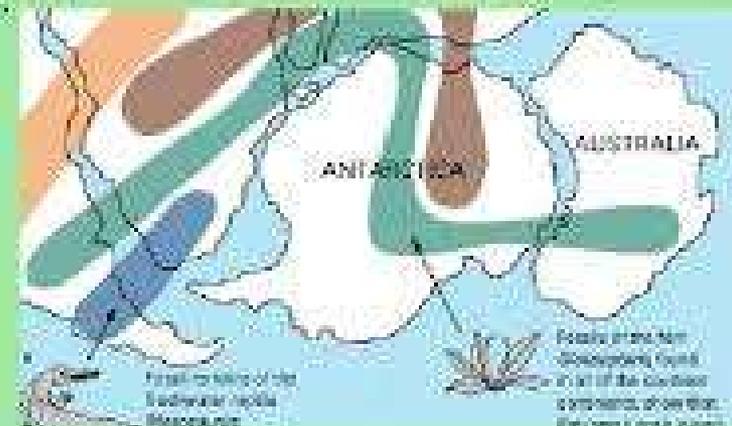
# Evidence from fossils

## *Glossopteris*

*(found in S. Hemisphere)*



Glossopteris – a seed fern plant. Identical fossils were found in S. America, Africa, Antarctica, India and Australia. /seeds could not have traveled by air or water across vast oceans.

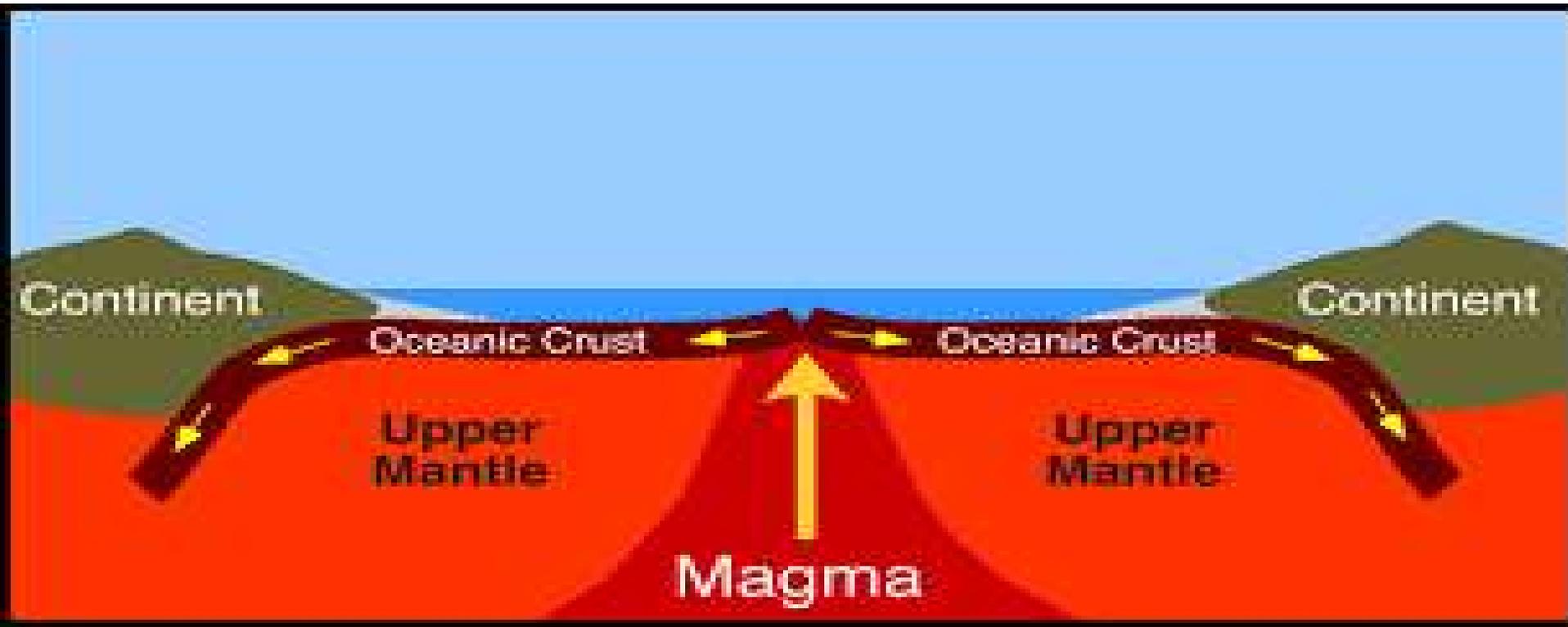


# Evidence from rocks

## mountains, shapes, deposits



# Evidence from sea-floor *sea-floor spreading* *mid-ocean ridge*



# Plate Boundaries

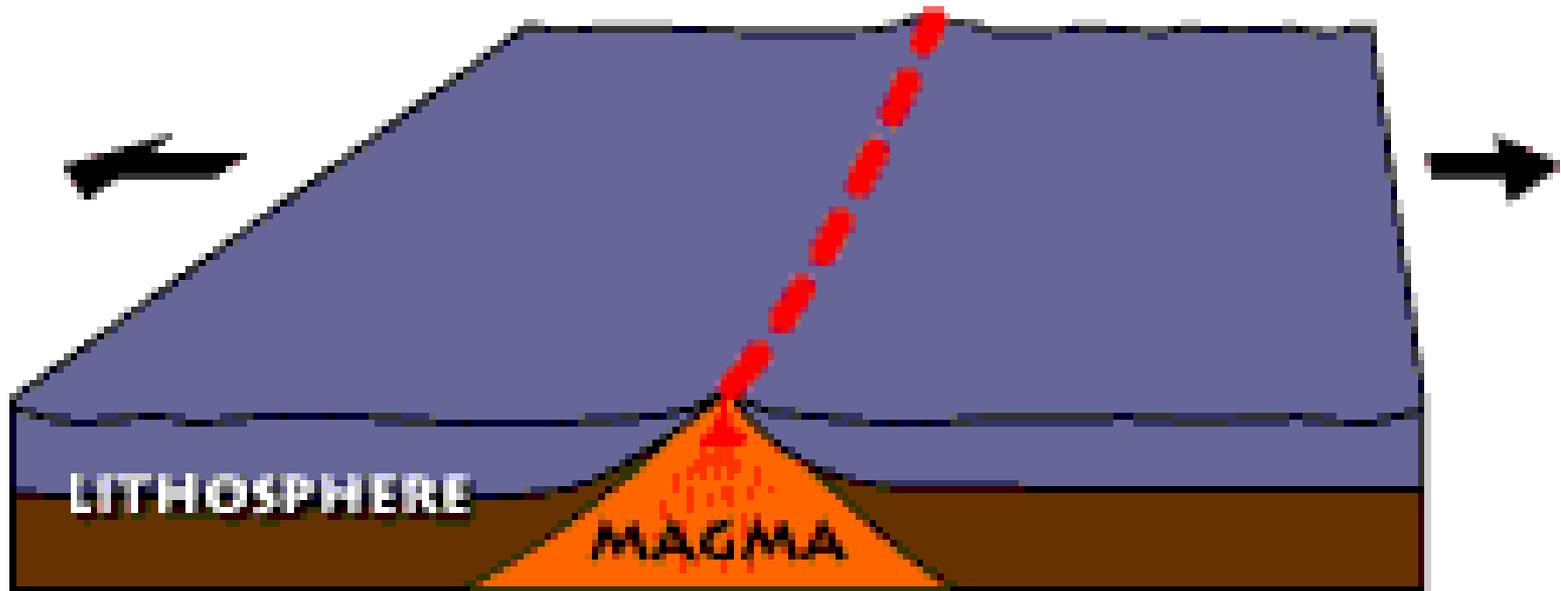


# Plate Boundaries

*Places where plate edges meet  
on Earth's surface*

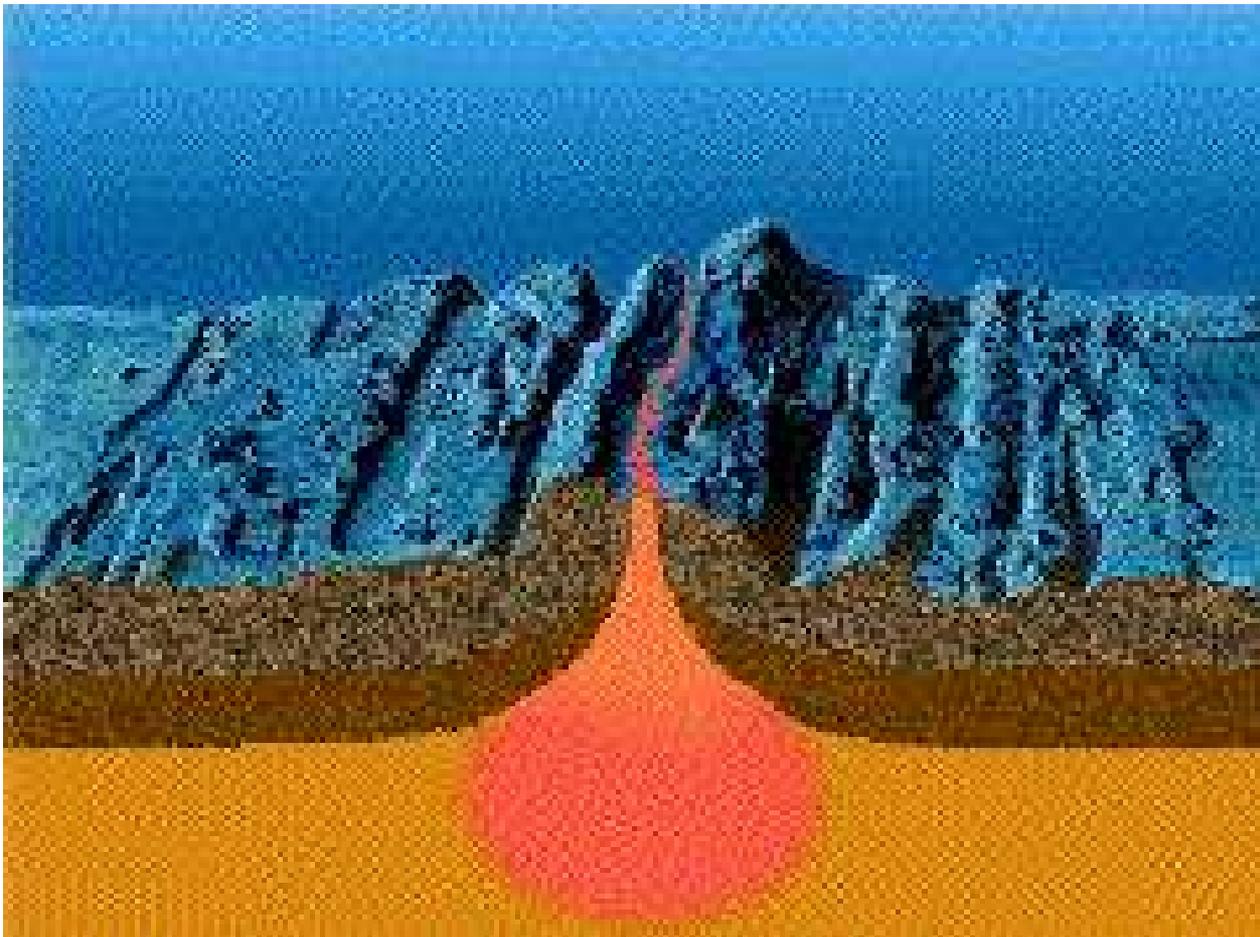
# Plate Boundaries

## Divergent boundary



# Plate Boundaries

## *Divergent boundary*



# Plate Boundaries

## *Divergent boundary*

*\* plates move apart* ← →



# Plate Boundaries

## *Divergent boundary*

- \* plates move apart

- \* *found along mid-ocean ridges*

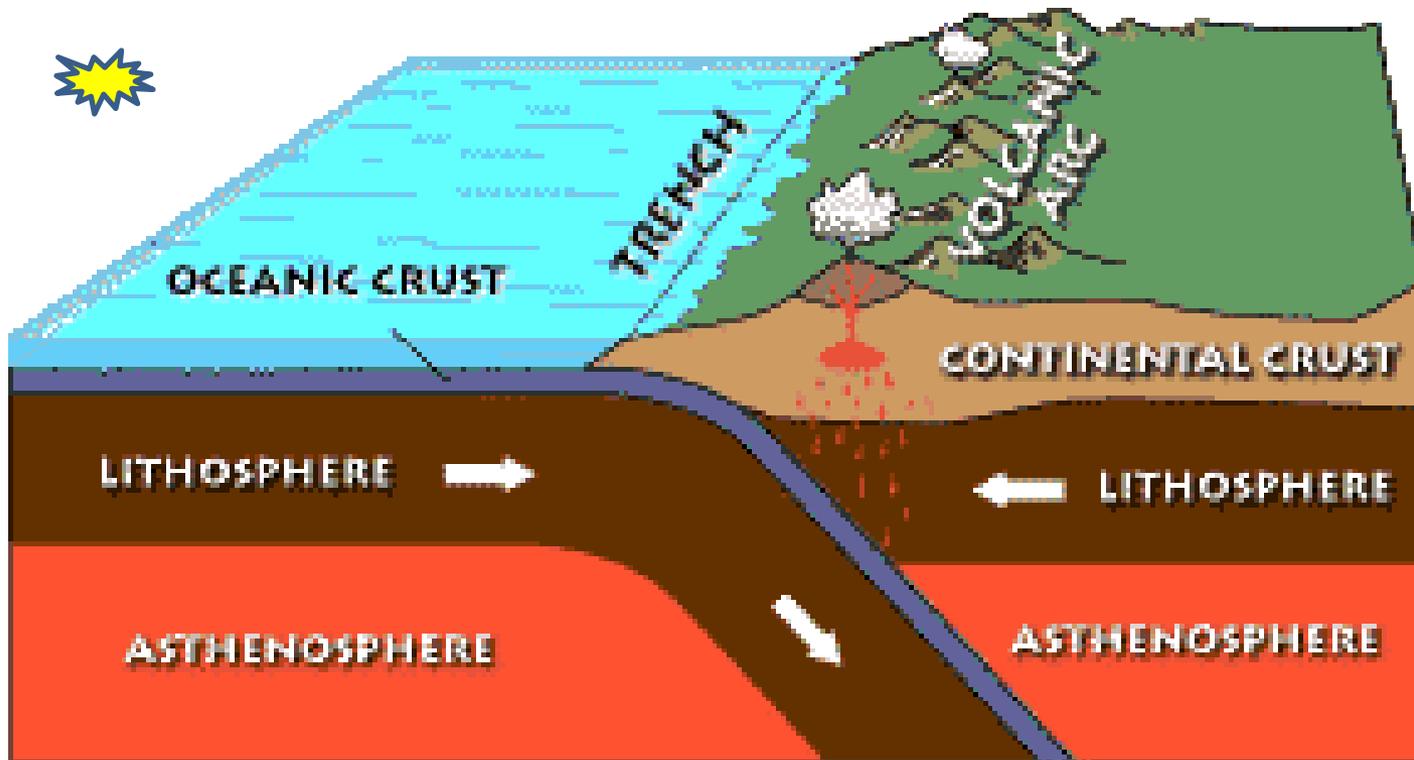
# Plate Boundaries

## *Divergent boundary*

- \* plates move apart
- \* found along mid-ocean ridges
- \* *called constructive boundary*

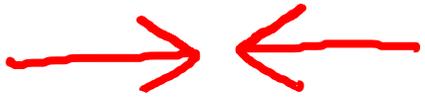
# Plate Boundaries

## *Convergent boundary*



# Plate Boundaries

## *Convergent boundary*

*\* plates come together* 

# Plate Boundaries

## *Convergent boundary*

\* plates come together

\* *found near trenches/mountains*

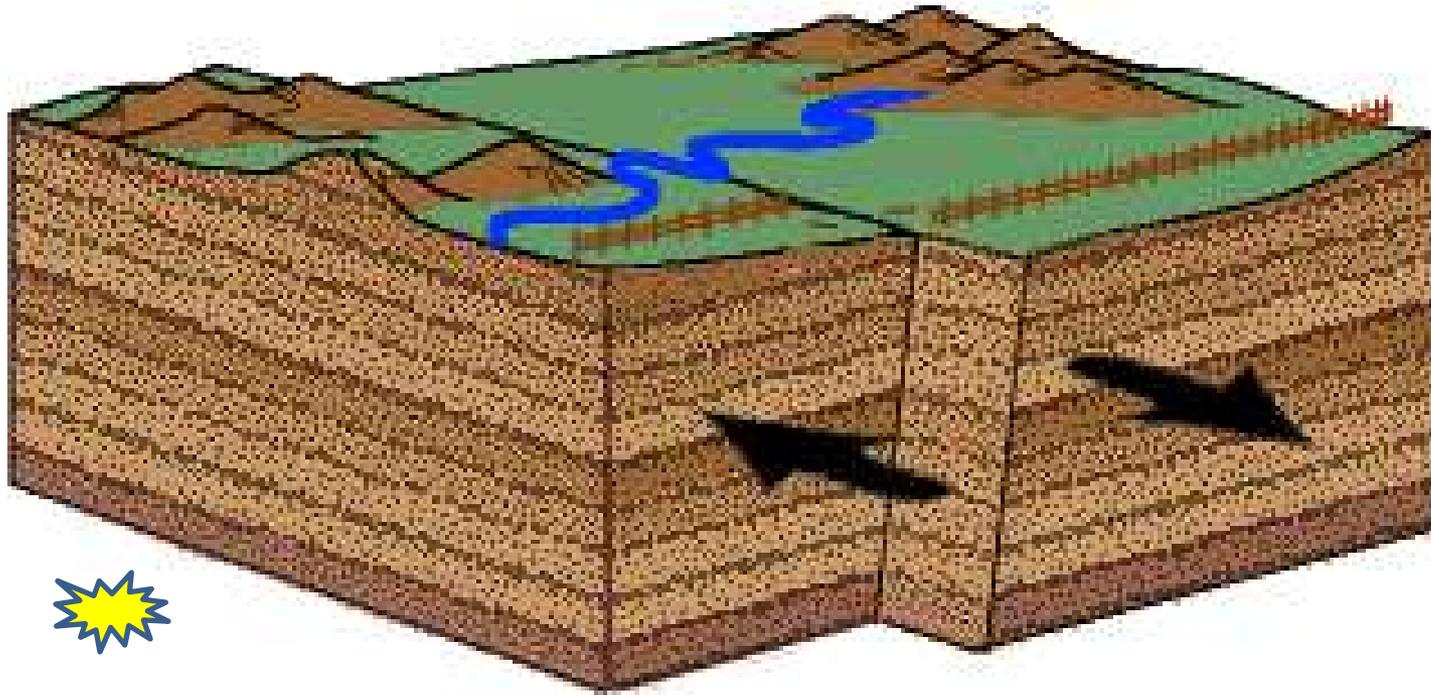
# Plate Boundaries

## *Convergent boundary*

- \* plates come together
- \* found near trenches
- \* *called destructive boundaries*

# Plate Boundaries

***Strike-slip boundary*** (Transform)



# Plate Boundaries

*Strike-slip boundary*

\* *grind horizontally* 

# Plate Boundaries

## *Strike-slip boundary*

\* grind horizontally

\* ***forms lateral faults*** (crack)

# Plate Boundaries

## *Strike-slip boundary*

- \* grind horizontally
- \* forms lateral faults
- \* *called a conservative boundary*

# Pangaea

*(All together Earth)*

# Pangaea



# Pangaea

*Large, single landmass that existed in the past - before breaking apart and moving into the current position*

# Pangaea Activity

1. **Label** the landmasses (use choices).
2. **Trace** landmasses as they appear.
3. **Color-code** evidence (use colors provided).
4. **Cut** out landmasses.
5. **Place** landmasses on table as they appear **today** (use map).
6. **Move** them into a **single** landmass (use the color-coded evidence).
7. **Tape** them together as **PANGAEA**.



Eurasia  
Africa  
India  
Greenland  
North America  
Antartica  
South America  
Australia



Greenland

Eurasia

North  
America

India

Africa

South  
America

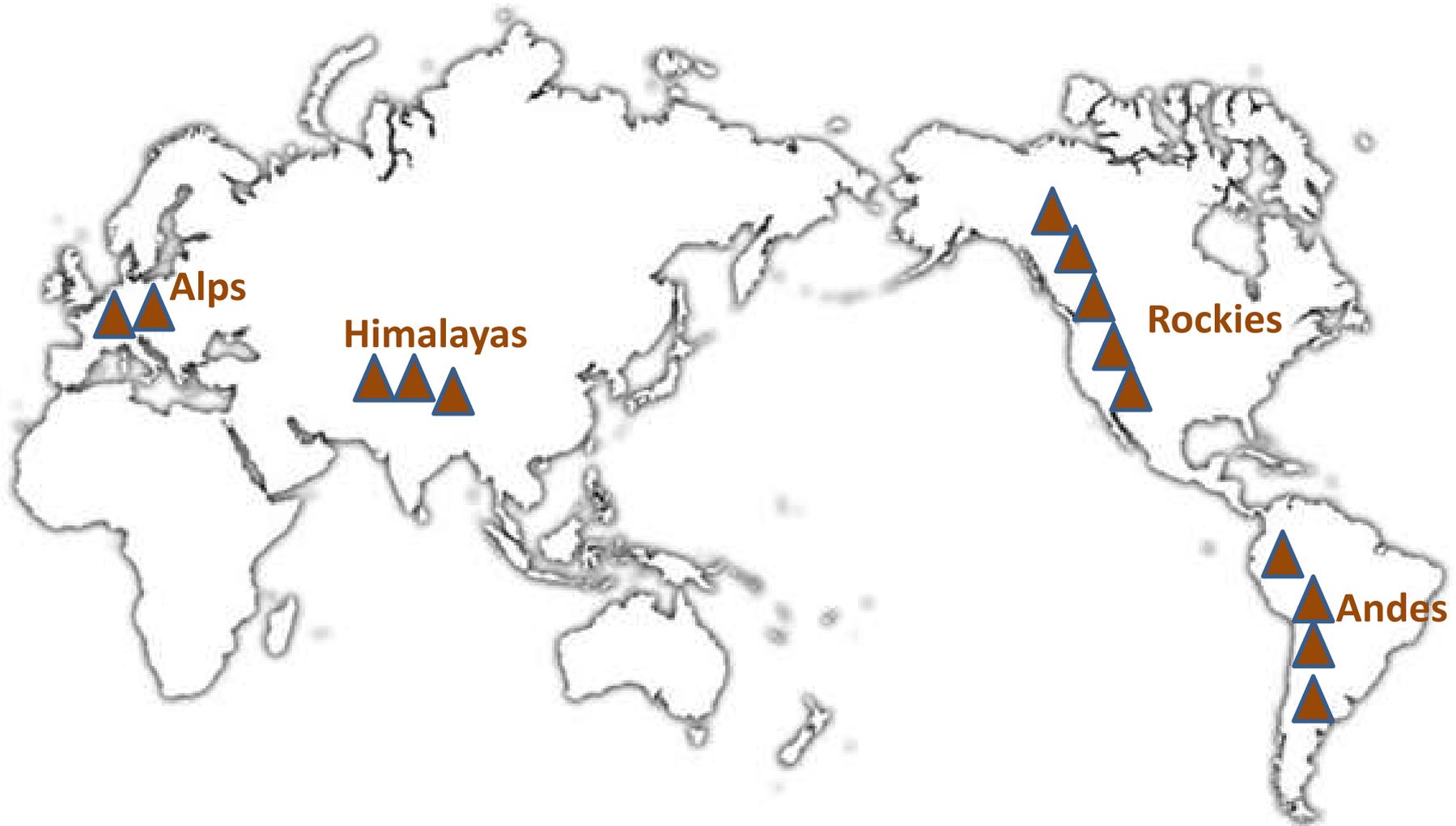
Eurasia  
Africa  
India  
Greenland  
North America  
Antarctica  
South America  
Australia

Antarctica

Australia







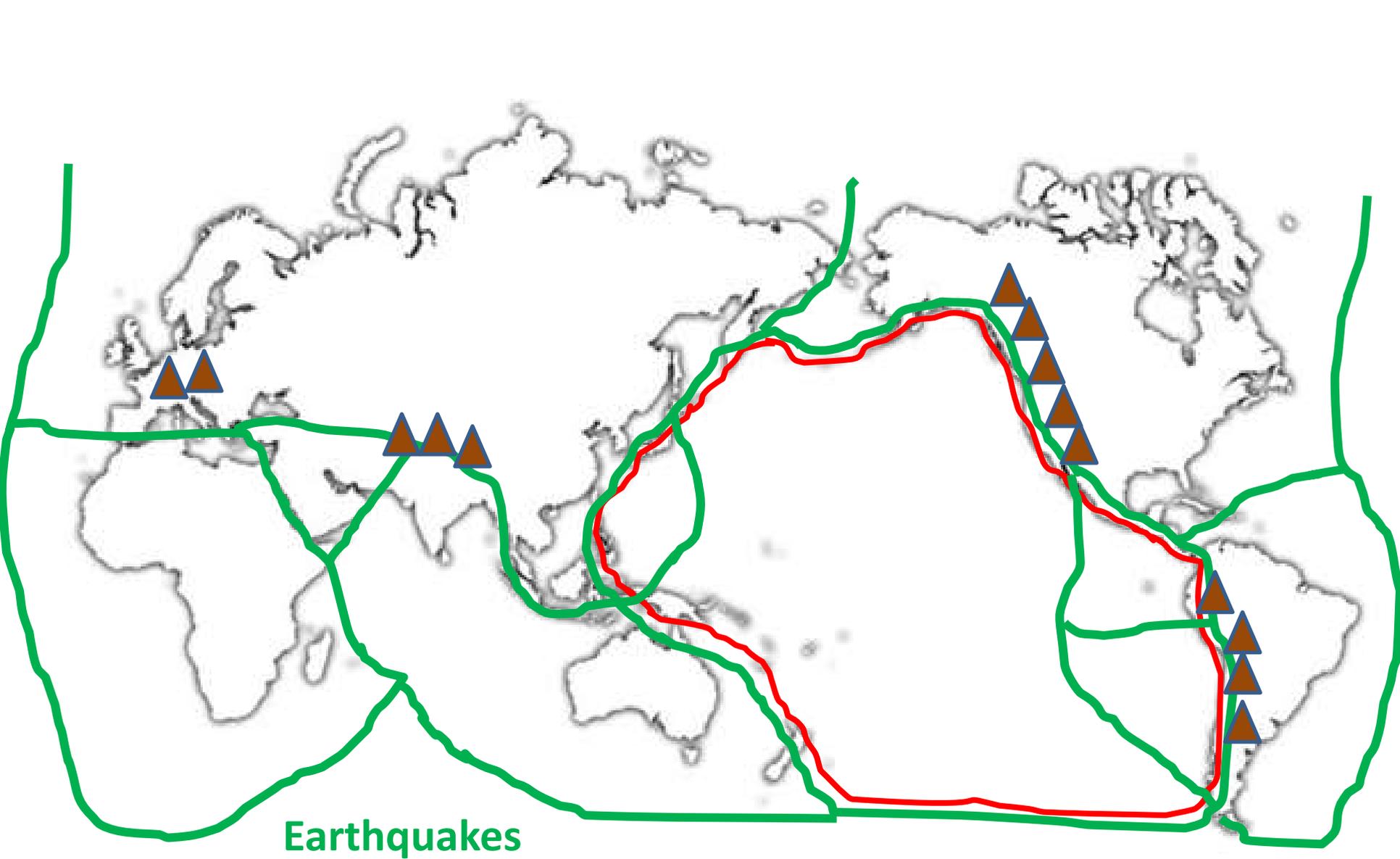
**Alps**

**Himalayas**

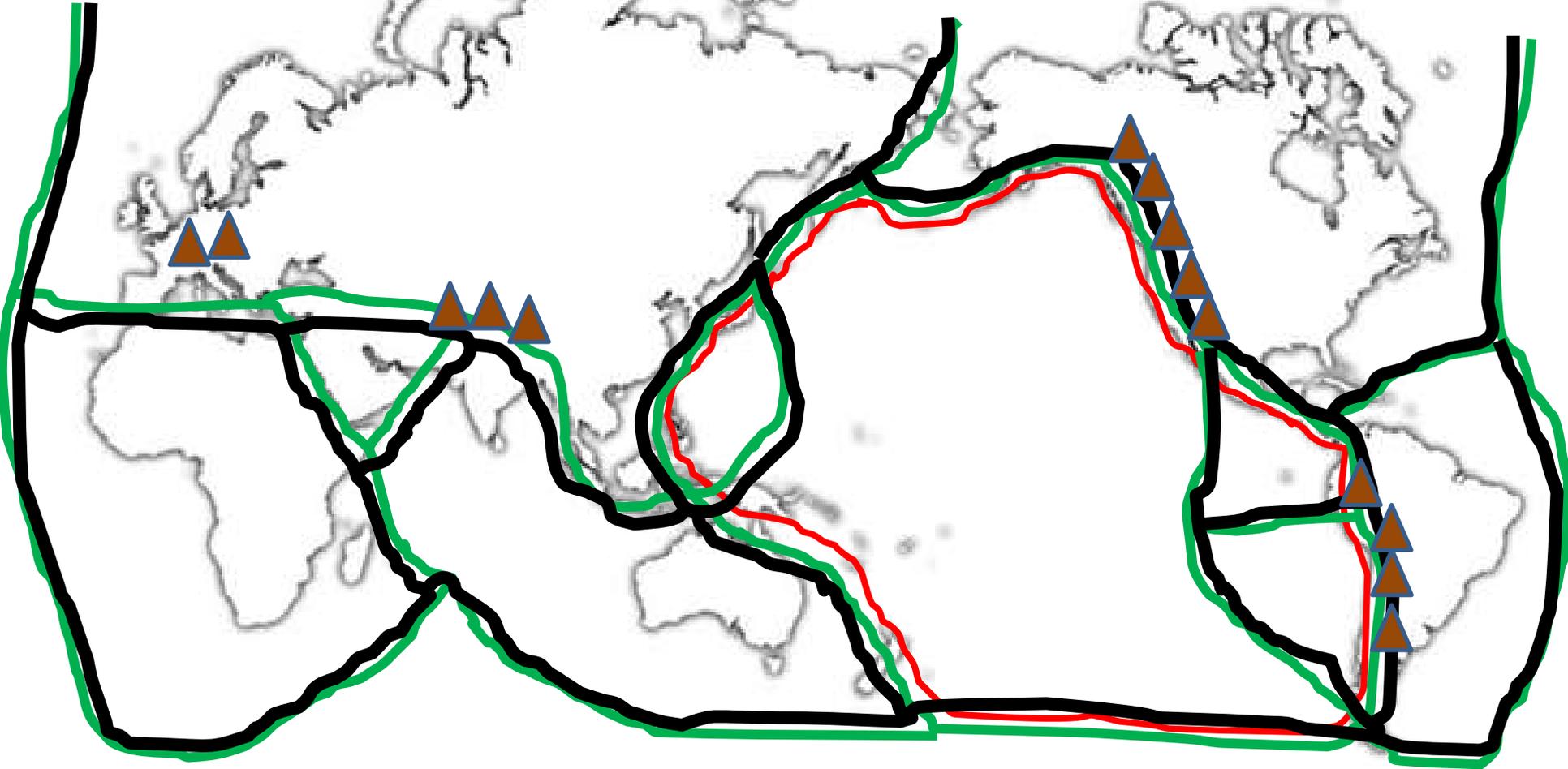
**Rockies**

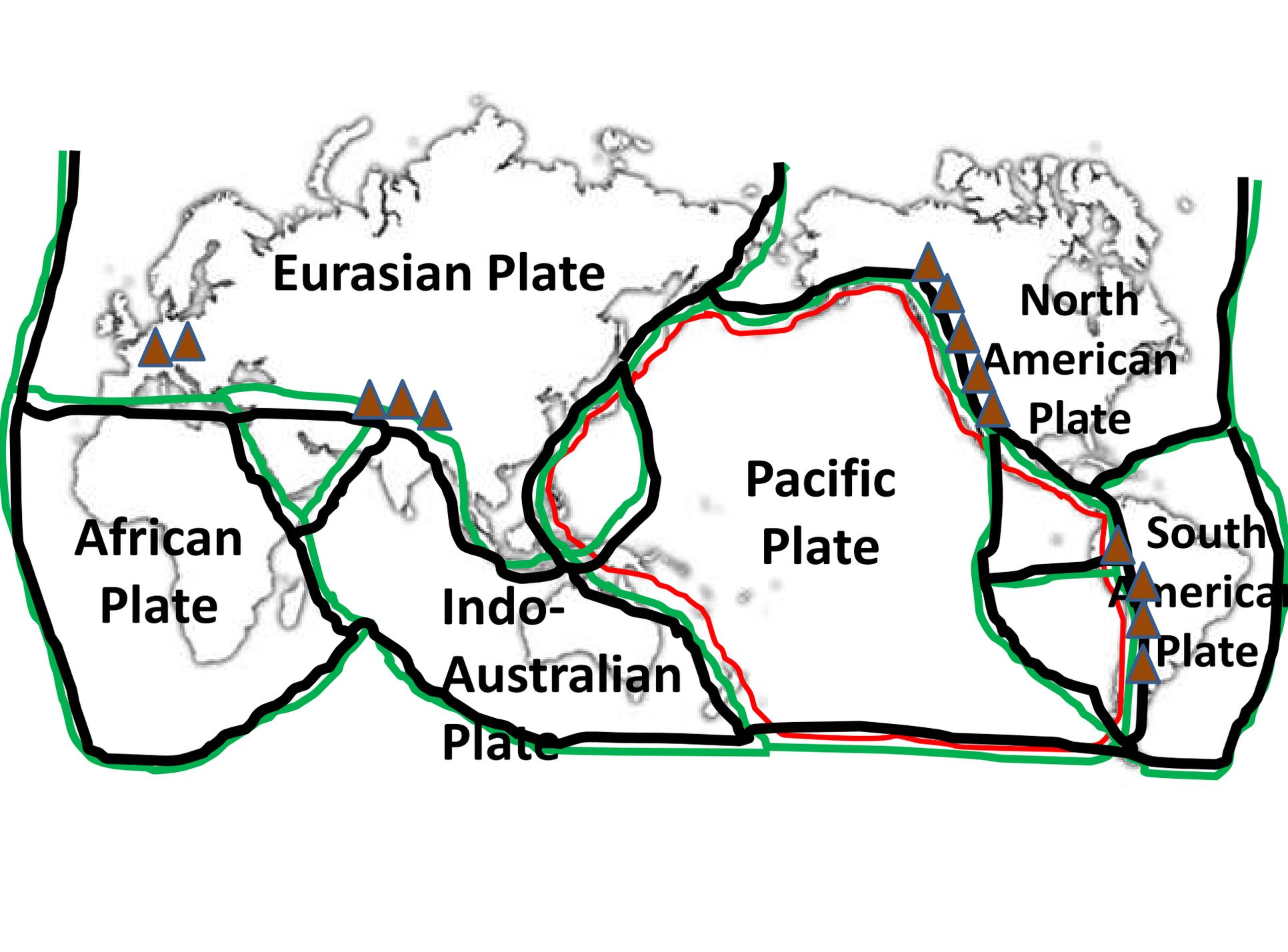
**Andes**





# Plate Boundaries





# “Crust in pieces”

