

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.

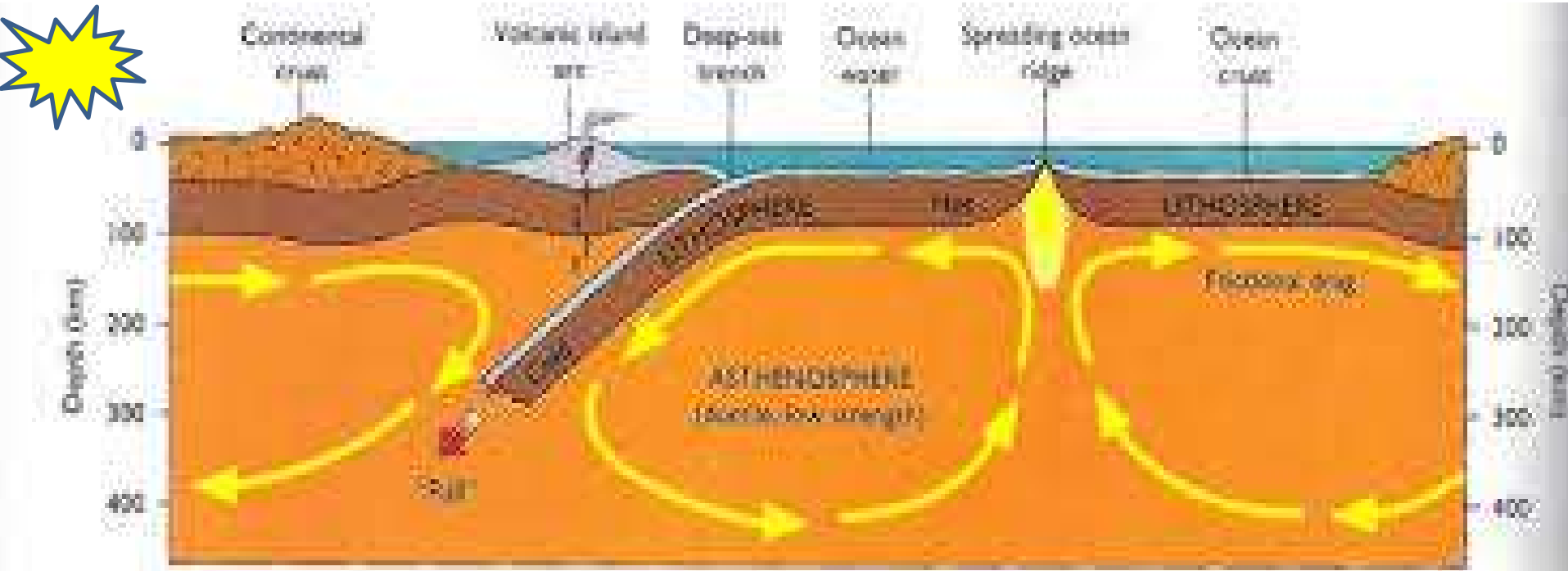
Plate Tectonics

A globe of the Earth is shown with various tectonic plates outlined in red and orange. The globe is set against a black background. In the center of the globe, there is a yellow starburst shape with a blue outline. Inside the starburst, the text "Watch Me!" is written in a bold, italicized, blue font.

Watch Me!

Plate Tectonics:

*- movement of rocky slabs
across the Earth*



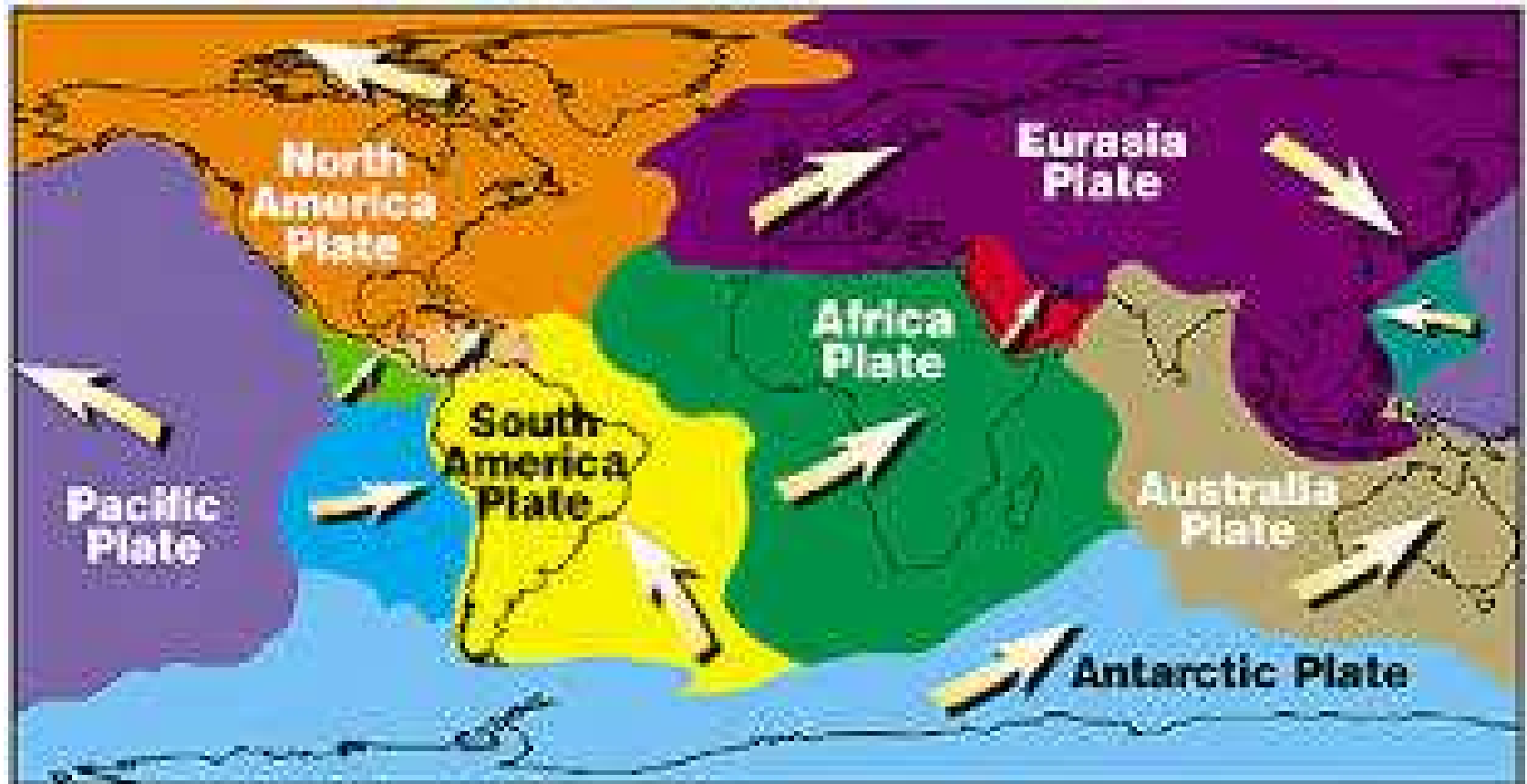
DRIVING MECHANISMS FOR PLATE MOTIONS

lithospheric plates – “rock slabs”



lithospheric plates – “rock slabs”

tectonics – “movement”



Continental Drift -

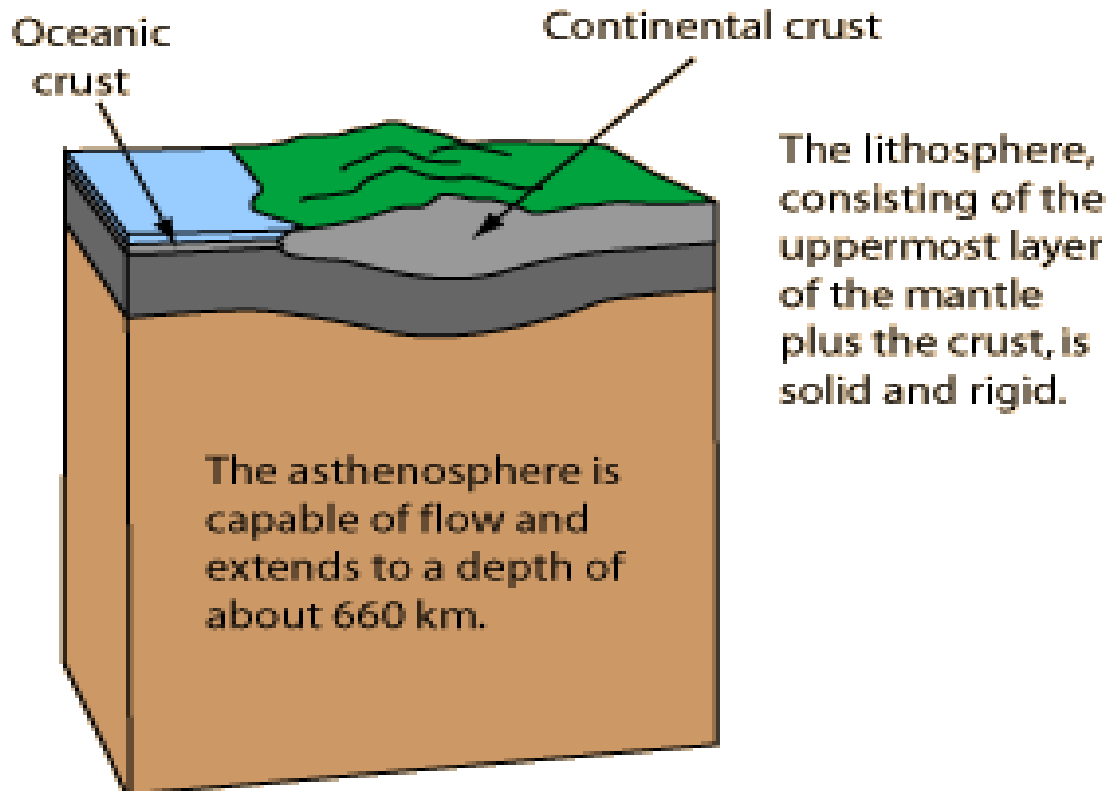
Theory proposed by

Alfred Wegener



Continental Drift:

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



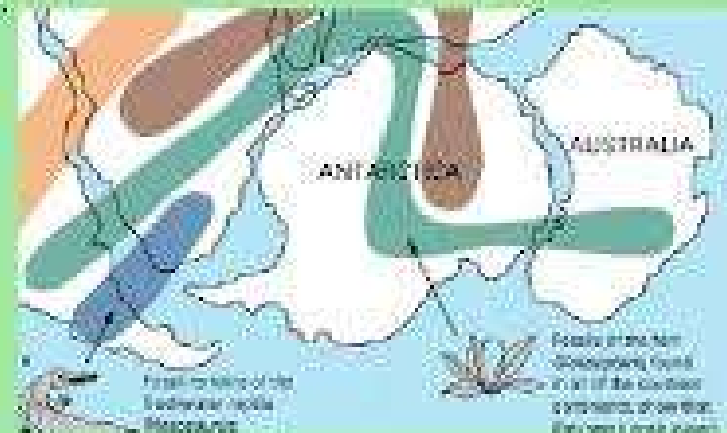
Evidence from fossils

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*

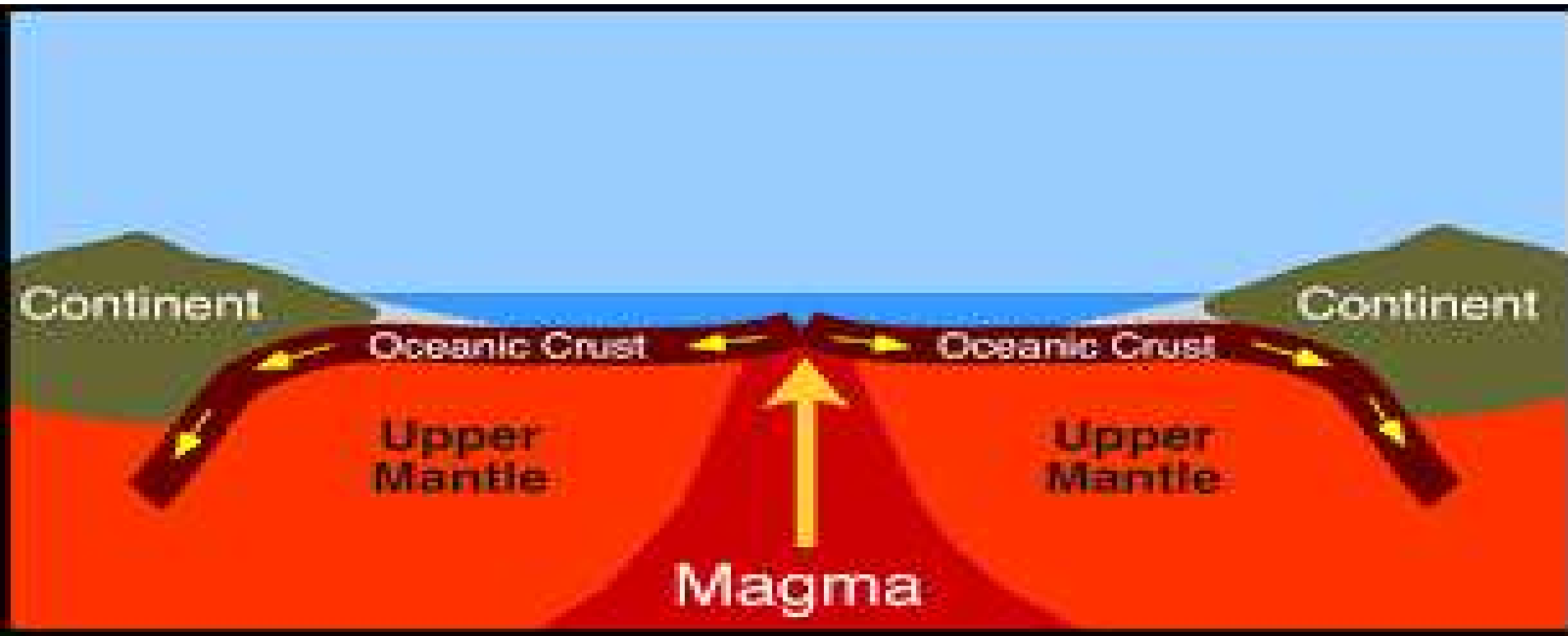


Plate Boundaries



Plate Boundaries

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

Plate Boundaries

Divergent boundary

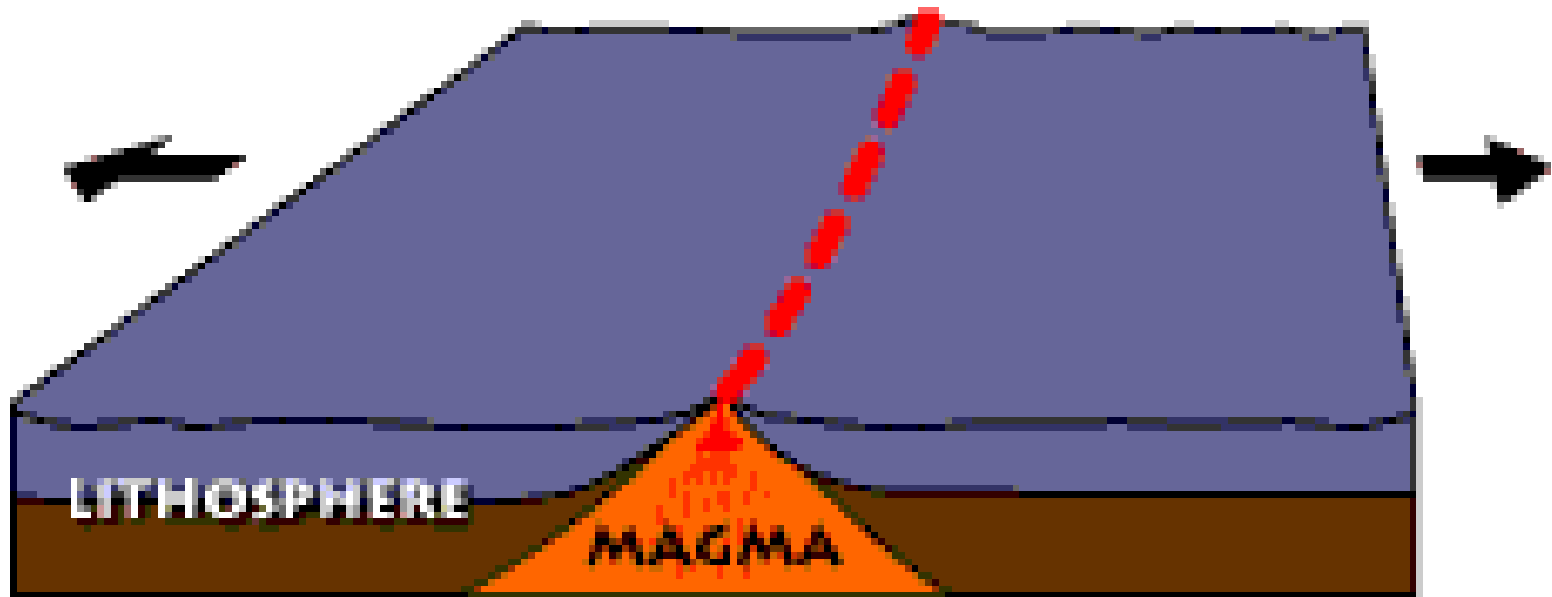


Plate Boundaries

Divergent boundary

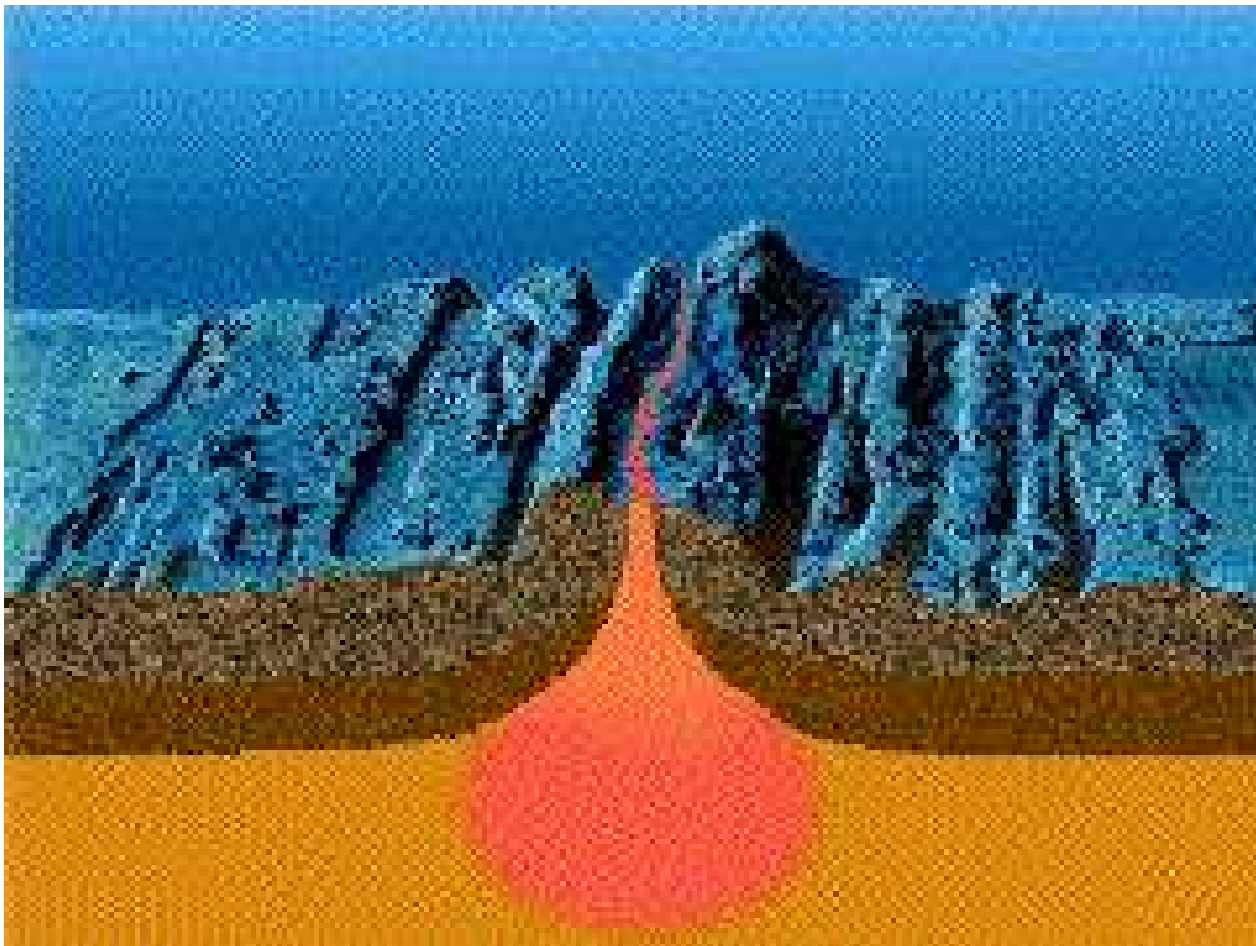


Plate Boundaries

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

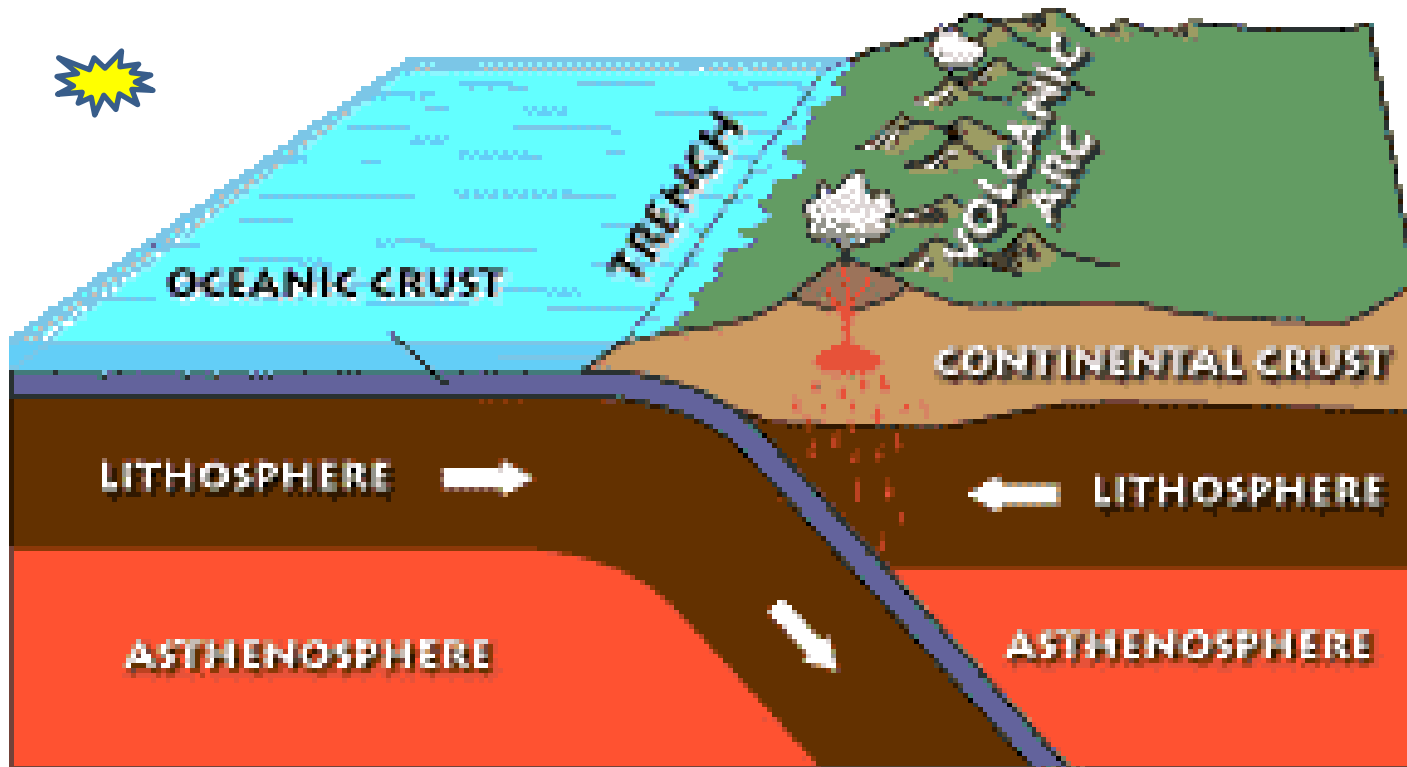


Plate Boundaries

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)

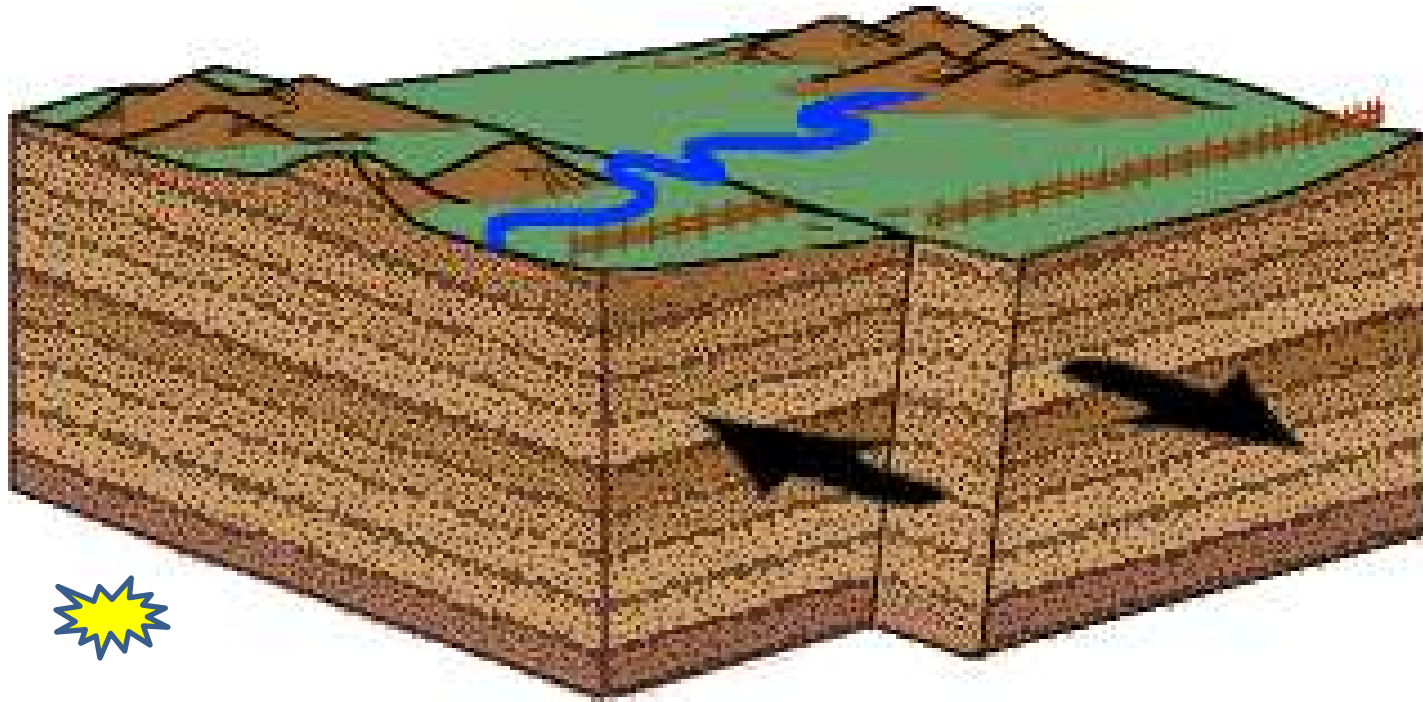


Plate Boundaries

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**.

“Crust in pieces”

