Daily Routine

- Sit in your appropriate seat quietly
- Have all necessary materials out
- All back packs on the floor
- All cell phones on silent and away in backpacks
- All IPods off and headphones out of your ears
- No food or drink except for water

Bellwork

- What evidence do we have to help explain the theory of plate tectonics?

- Choose one of those lines of evidence and explain how it helps show the theory of plate tectonics.

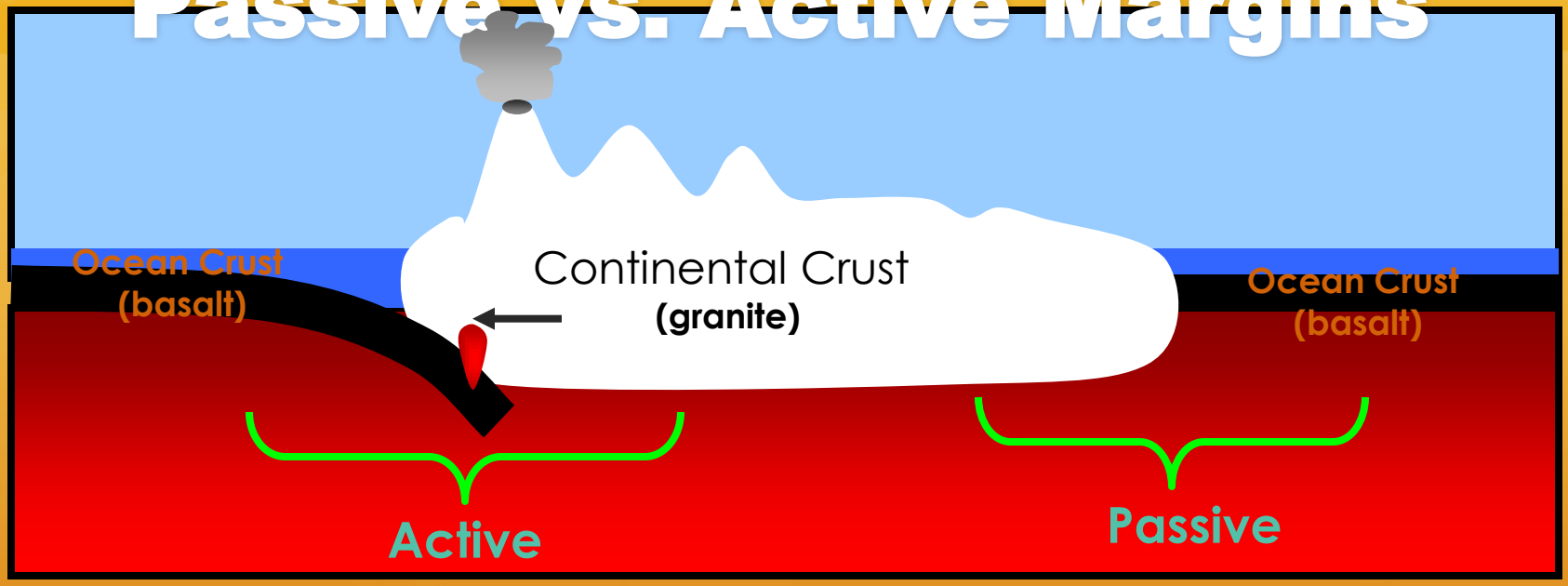
Plate Tectonics: Convection Currents

Mr. Hamilton
CP Earth Science
Roseville High School
RJUHSD

I will be able to…

- Locate where passive and active areas on plates
- Describe the differences between passive and active margins
- Explain how convection currents work
- Explain how convection currents move tectonic plates

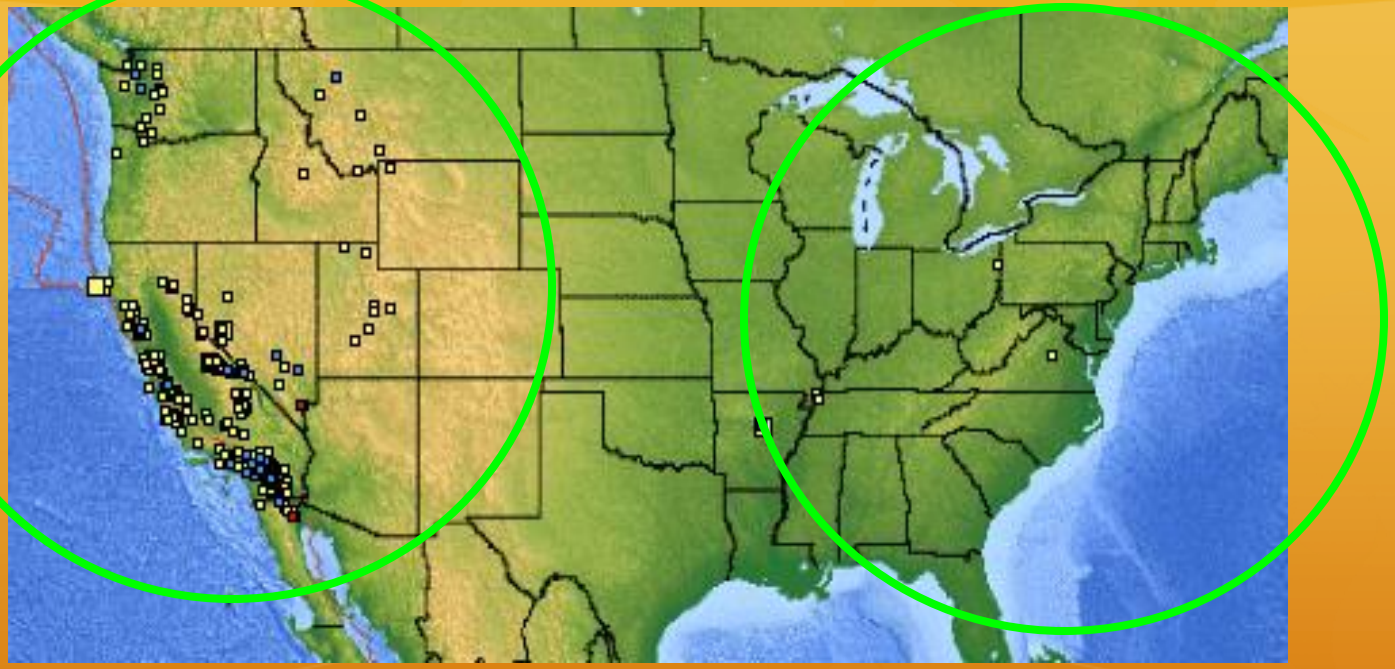
What is the difference between Passive vs. Active Margins



- Active continental margins are located at **convergent plate** boundaries
- They are active because they experience frequent earthquakes and volcanic eruptions
- Ex: West of United States

- Passive continental margins have no plate boundaries
- They are passive because they experience no earthquake activity
- Example: East Coast united states

Passive vs. Active Margins



- West coast is Active, check out he earthquake over the last two weeks
- Now check out the east coast…..Not much happening

How do our plates move?

- If you recall, Alfred could not explain what caused the plates or continents to move
- Since he could not explain how the continents drifted apart, his hypothesis was rejected
- Today, we know our plates move through spreading, sliding, and subduction
- The main driving force for plate tectonics happens in the Mantle or Asthenosphere

Modeling Plate Tectonic Mechanism

- http://www.youtube.com/watch?v=7xWWowXtuvA

How do our plates move?

- If you recall, Alfred could not explain what caused the plates or continents to move
- Since he could not explain how the continents drifted apart, his hypothesis was rejected
- Today, we know our plates move through spreading, sliding, and subduction
- The main driving force for plate tectonics happens in the Mantle or Asthenosphere
- Convections currents move tectonic plates/lithosphere through heat changes in the Mantle

Hot Magma rises at Divergent Plate Boundaries creating new ocean crust

As the magma cools, it drags the plate back into the Mantle

Where it is destroyed (melts)

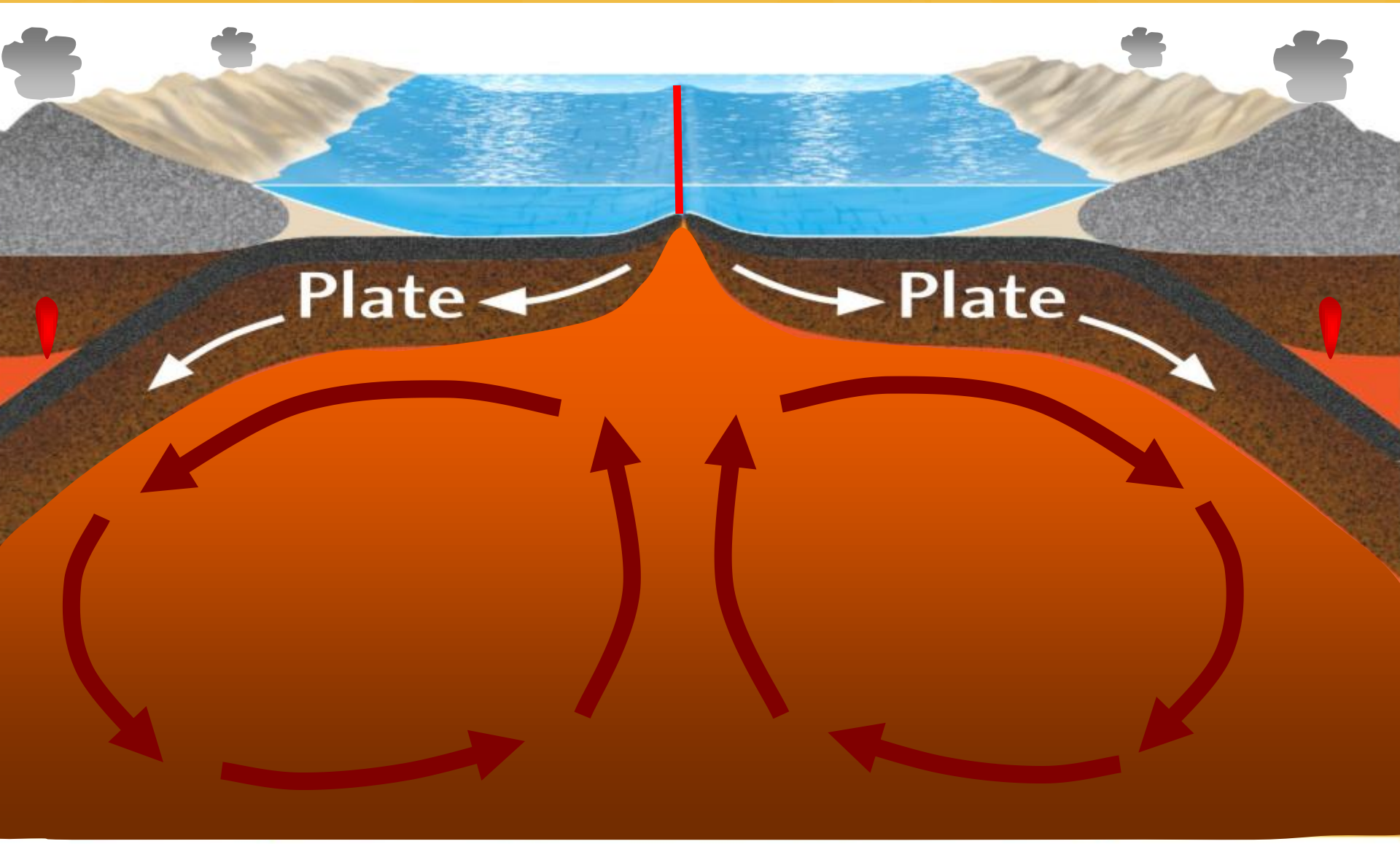


Diagram and Label