

Plate Tectonics Notes

What are plates?

- Plates are pieces of the lithosphere.
- Plates fit together like pieces of a jigsaw puzzle.
- The plates float on top of the mantle similar to ice cubes in a bowl of water.

Review of Convection Currents

- Convection currents cool down as they come closer to the surface of the Earth.
- The current stops rising and runs along the bottom surface of the Earth's crust.
- When the current cools down more, it falls back toward the core.
- The temperature increases and the current rises again. This goes on and on.

How Do Plates Move?

- The plates are part of a section of the Earth called the lithosphere.
- The lithosphere glides on the mantle.
- The movement of the convection currents carries the plates along.
- Plates only move a few centimeters each year.

Plate Boundaries

- Plate boundaries are the places where plate movement is easiest to see.
- There are three different types of plate boundaries:
 1. Convergent plate boundaries
 2. Divergent plate boundaries
 3. Transform plate boundaries

Convergent Plate Boundaries → ←

- At these boundaries, two plates move toward each other.
- As two plates push together, one or both of the plates has to go somewhere.
- There are three types of convergent plate boundaries: continental-continental convergence, continental- oceanic convergence, and oceanic-oceanic convergence.
- Convergent plate boundaries create ocean trenches, and chains of mountains or explosive volcanoes.

Divergent Plate Boundaries ← →

- At these boundaries, two plates move away from one another.
- Magma from the mantle oozes through a crack in the crust and cools.
- This causes the growth of crust on either side of the crack in the crust.
- As the plates continue to move apart, more and more crust is created and a ridge forms.
- Divergent plate boundaries create mid-ocean ridges or mountain chains.

Transform Plate Boundaries ↓ ↑

- These plate boundaries happen when two plates slide past each other in the opposite direction.
- The plates are neither created nor destroyed.
- The line that the plates move along is called a fault.
- Transform plate boundaries create fault lines, places where earthquakes are common.