Name: _____

BK: ___ Date: _____

The theory of plate tectonics is the unifying theory that explains Earth's geological processes.

- How does the movement of Earths tectonic plates cause observable changes and effects?
- How does tectonic plate movement affect you locally?

Student Objectives

Statement	Beginning	Approaching	Meeting	Succeeding	Exceeding
I can explain the difference between Continental Drift and The Theory of Plate Tectonics					
I can describe convection currents in the mantle and its impact on the movement of the crust					
I can distinguish between oceanic and continental "crust"					
I can describe the composition of the layers of the Earth : (crust, mantle, outer core, inner core)					
I can describe the types of plate boundaries: (convergent, divergent, and transform)					
I can describe how volcanoes and trenches form					
I can describe how mountain ranges form					
I can describe how earthquakes occur					
I can relate tectonic processes to local geological events					
I have an earthquake safety kit					

Summary of Key Points:

Continental Drift Theory

- Various pieces of evidence indicate that the continents were once joined but later drifted to their current positions:
    1. The continental shelves of the continents can be aligned like a jigsaw puzzle.
    2. Regions of some continents that are far apart have similar rocks, mountain ranges, fossils, and patterns of paleo-glaciation.

Plate Tectonics Theory and Convection

- The process of sea floor spreading provides a mechanism for continental drift.
    1. The continents are attached to huge slabs of rock, known as tectonic plates.

Earths Layers and Convection

- Earth has distinct layers.
- When the tectonic plates move across Earth's surface, they carry the continents with them.

Plate Interactions

- Convection currents from the asthenosphere push magma to Earth's surface, causing tectonic plates to move and sometimes converge, or come together (Convergent plates)
- When tectonic plates converge, one plate may slide beneath the other or the edges of the plates may crumple, forming **mountains**.
- Tectonic plates can also diverge, (Divergent plates) or spread apart, forming **rifts** on land and **ridges** in the oceans.
- Tectonic plates can slide past each other (Transform plates) and earthquakes and faults may form

Volcanoes and Earthquakes

- Tectonic plates may begin to slide past one another at a transform boundary, resulting in the build-up of pressure, which may be released as an earthquake.
- Volcanoes occur at tectonic plate boundaries or over geologic hot spots, where magma is coming up through Earth's crust.