

Topic/Objectives: 2-3 Plate Tectonics; (1) Explain the Theory of Plate Tectonics by describing the processes involved, the geologic features used as supporting evidence, and the major changes in Earth's crust that have occurred as a result of crustal movement. (2) Use the development of the Theory of Plate Tectonics to discuss how scientific ideas and research evolve into a unified theory.		Name:
		Date:
		Period:
Essential Question: What role did the movement of Earth's tectonic plates play in shaping our oceans?		
Questions:	Notes:	
	Plate tectonics helps explain Alfred Wegner's _____ (1912). <ul style="list-style-type: none"> ◦ He suggested that the continent used to be a single supercontinent (_____) that began up 180 million years ago. ◦ The main features of plate tectonics: <ul style="list-style-type: none"> ◦ The Earth's surface is covered by a series of _____. ◦ The ocean floors are constantly moving; they are spreading in the _____ and sinking at the _____ and being _____. ◦ _____ currents beneath the plates assist movement. ◦ _____ from the mantle drives these currents. 	
	Evidence for Plate Tectonics <ul style="list-style-type: none"> ◦ Mid-Oceanic Ridges <ul style="list-style-type: none"> ◦ The mid-oceanic ridges are a chain of submarine volcanic mountains that rise from the _____. ◦ At regular intervals, the ridge is displaced by faults in the Earth's crust called _____. ◦ _____ accumulates; therefore being thicker away from the ridges, means that the crust further from the ridge is _____. ◦ Geomagnetic Anomalies: <ul style="list-style-type: none"> ◦ At random intervals, the Earth's magnetic field _____. ◦ New rock formed from magma records the orientation of Earth's magnetic field at the time the magma _____. ◦ Studies of the seafloor have revealed " _____ " of alternating magnetization parallel to the mid-oceanic ridges. 	
	Formation of the Seafloor <ul style="list-style-type: none"> ◦ Huge slabs of _____ are separating at the mid-ocean ridges which create cracks in the crust called <u>rifts</u>. ◦ When a _____ occurs, it releases some of the pressure on the underlying mantle. ◦ The reduced pressure allows hot _____ material to melt and rise up through the rift. ◦ When this molten material reaches Earth's surface, it cools and solidifies to form new _____. 	

◦ This process by which the sea floor moves away from the mid-ocean ridges to create new sea floor is called _____ - _____.

The lithosphere is broken into a number of plates called _____ or tectonic plates.

A plate can contain continental crust, _____, or both.

Mid-ocean ridges form the edges of many plates.

The plates spread from _____ per year.

As new lithosphere is created, old lithosphere is _____.

Lithosphere is destroyed at the subduction zone when two plates collide and one plate dips below the other plate.

When an oceanic plate collides with a continent, it is _____ the oceanic plate that descends into the mantle.

When oceanic and continental plates collide, continental _____ develop behind the trench.

_____ can form when two oceanic plates collide.

When two continental plates collide, a trench does not form. The plates push against each other and fold which forms _____.

The Himalayas formed when India collided with the rest of Asia.

_____ form when two plates slide past each other and they do not create or destroy lithosphere.

Friction prevents the plates from sliding smoothly. The plates lock together until stress builds up enough to cause a slip. The slip of the plates causes an _____.

Scientists hypothesize that the plates move mainly because of
 “ _____ ”.

During slab pull, old, cold, and dense lithosphere sinks into the mantle and pulls the rest of the plate behind it.

Summary:

[illegible]