Name: _____ Date: _____Period: _____

Visit: http://www.learner.org/interactives/dynamicearth/slip.html

Part 4: Slip Slide, & Collide

Learner.org: Dynamic Earth II

List a few "dramatic geological phenomena" that can be experienced on Earth as a result of tectonic plate motion. Then click See what happens at different plate boundaries

Convergent Boundaries - Colliding Plates

Summary: At convergent boundaries, tectonic plates collide with each other. The events that occur at these boundaries are linked to the types of plates – oceanic or continental – that are interacting.

Subduction Zones and Volcanoes

- Oceanic crust tends to be _____ and _____ than continental crust, so the _____ oceanic crust gets bent and pulled under, or _____, beneath the _____ and _____ continental crust.
- As the oceanic crust sinks, a deep oceanic _____ or valley is fomed at the edge of the continent.
- The crust is forced deep into the earth where high _____ and _____ cause trapped water and other gases to be released. This, in turn, makes the base of the crust melt, forming _____.
- The magma formed rises up toward the earth's surface and builds up in _____ _____ where it feeds and creates _____.

Define the following new terms:

Term	Definition
Volcanic Arc	
Trench	
Subduction Zone	

Describe how an *island arc* can form. Include the following terms: subduction, oceanic, plate, older, younger

Collision Zones and Mountains:

Summary: Because the rock making up continental plates is generally _____ and less _____ than oceanic rock, it is too light to get pulled under the earth and turned into magma. Instead, a collision between two continental plates _____ and folds the rock at the boundary, lifting it up and leading to the formation of _____ and _____ _____.

Mr. Dennis is considering climbing Mt. Everest. Explain why his climb of Mount Everest next year will be harder than any person who has climbed the same mountain any day before him.

When finished, click Next

Divergent Boundaries – Spreading Plates

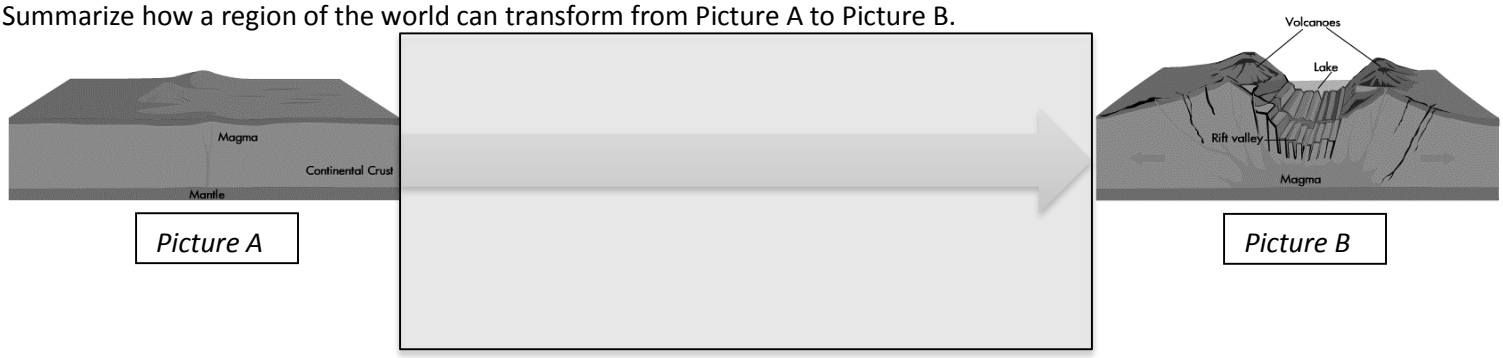
Summary: At divergent boundaries, tectonic plates are moving away from each other. But if these huge masses of crust are moving apart, what happens in the space left between them?

Seafloor Spreading

- Divergent boundaries in the middle of the _____ contribute to seafloor spreading.
- As plates made of oceanic crust pull apart, a _____ in the ocean floor appears.
- _____ then oozes up from the _____ to fill in the space between the plates, forming a raised ridge called a _____ _____.

Rifts

Summarize how a region of the world can transform from Picture A to Picture B.



Picture A

Picture B

Transform Boundaries – Grinding Plates

Summary: At transform boundaries, tectonic plates are not moving directly toward or directly away from each other. Instead, two tectonic plates grind past each other in a horizontal direction. This kind of boundary results in a **fault** — a crack or fracture in the earth's crust that is associated with this movement.

Faults and Earthquakes

Describe the process for how transform boundaries lead to earthquakes in 4 – 5 short bullets.

You are NOT required to complete the 30 question "Test your Skills".