

Name _____

Plate Tectonics & Sea Floor Geography Pre-Lab Exercise

Video 1: Motion at Plate Boundaries

Mark the blank boxes according to whether the features listed occur at divergent, convergent, or transform plate boundaries.

Process or feature	DIVERGENT boundary	CONVERGENT boundary	TRANSFORM boundary
Sea floor spreading			
Subduction			
Side-by-side sliding			
Mid-ocean ridges			
Ocean trenches			
Transform faults			
Earthquakes			
Volcanic eruptions			
Pillow lava			
Volcanic arcs			
Ocean floor created			
Ocean floor destroyed			

Video 2: Plate Boundary Features

1) Why does a world map of earthquakes match up well with a map of the Earth's plate boundaries?

2) Why does a world map of volcanoes match up closely with some plate boundaries? What specific plate tectonic process creates most of the world's volcanoes?

3) Why does a world map of young, active mountain belts match up closely with some plate boundaries?

Video 3: Volcanic Activity and Plate Motions

1) In the spaces below, draw a cross-section (a “side-view” slice into the Earth) portraying a **continental volcanic arc** and a cross-section portraying a **volcanic island arc**.

continental volcanic arc

volcanic island arc

2) Describe similarities and differences between **continental volcanic arcs** and **volcanic island arcs**:

Similarities:

Differences: