

Unit  
3Handout  
84

## Lesson 6: Plate Boundaries

**Purpose:** To provide background on the interactions between plates.

**Guiding Questions:** How are geologic formation related to the interactions between plates?

**Instructions:** Fill in the following graphic organizer with information from the presentation.

**NOTE TO STUDENTS:** The information here may vary from what you learned in your groups. This is because you were wonderful at finding a large variety of sources to complete this sheet! Just keep in mind that my answers are based on only a few sources.

### Convergent Boundaries

<b>Definition</b>	Where two plates come together (converge) and the leading edge of one plate sinks below the other.	
<b>Also known as</b>	Subduction zones, Collision Boundary, Destructive Boundary	
<b>Types and what happens</b>	<b>Types</b>	<b>What happens/forms</b>
	Continental-Continental	Two continental crusts collide with each other, creating mountain ranges.
	Continental-Oceanic	Oceanic crust sinks (subducts) under the continental crust. This forms a continental volcanic arc on land and a trench in the ocean.
	Oceanic-Oceanic	The denser oceanic crust subducts below the other oceanic crust. This form a volcanic island arc and a trench in the ocean.
<b>Constructive Effects</b>	Mountain ranges, continental volcanic arcs, volcanic island arcs, and trenches form.	
<b>Destructive Effects</b>	Crust is "destroyed" as it sinks below continental crust (all types).	

\* This boundary is primarily destructive because most of the crust is subducted.

**Divergent Boundaries**

<b>Definition</b>	A location where two plates move away from each other. Causes convergent boundaries.	
<b>Also known as</b>	Continental rifting, oceanic ridges, constructive boundary, extension boundary	
<b>Types and what happens</b>	<b>Types</b>	<b>What happens/forms</b>
	Continental-Continental	Two continental crusts spread apart from rising magma. The land above sinks, forming a rift valley. The crust begins expanding as new continental crust is created. Volcanoes appear. A linear sea can form in the valley.
	Oceanic-Oceanic	Two oceanic plates spread apart, creating an oceanic ridge. This is caused by rising magma.
<b>Constructive Effects</b>	New crust (at both types). At C-C: rift valley, volcanoes, and linear seas.	
<b>Destructive Effects</b>	None	

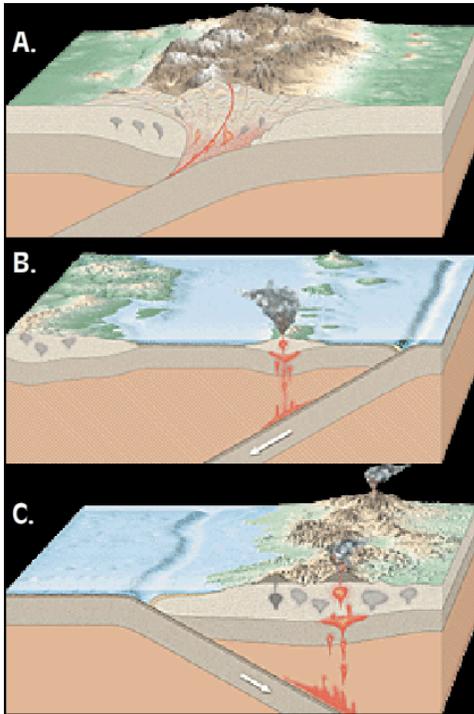
\* This boundary is primarily constructive because of the new crust it creates.

**Transform Boundaries**

<b>Definition</b>	A location where two plates slide/grind past each other.	
<b>Also known as</b>	Fracture zones, conservation boundaries	
<b>Types and what happens</b>	<b>Types</b>	<b>What happens/forms</b>
	Continental-Continental	Plates grind past each other, can cause earthquakes.
	Oceanic-Oceanic	Plates grind past each other, can cause earthquakes.
<b>Constructive Effects</b>	None	
<b>Destructive Effects</b>	None	

**Review.** Complete the following section based on the information you learned.

1. Name the type of boundary that matches each alternative name.
  - a. Subduction zone: **Convergent**
  - b. Spreading center: **Divergent**
  - c. Fault boundary: **Transform**
  
2. Name the type of convergent boundary shown below.



**Convergent Continental-Continental**

**Convergent Oceanic-Oceanic**

**Convergent Oceanic-Continental**

3. Place the following terms into the correct place on the chart.

Boundary type	Location:	Results in:
Divergent	in ocean	Oceanic Ridge
	on land	Cont. Rift Valley
convergent	oceanic-continental	Cont. Volcanic Arc
	oceanic-oceanic	Volcanic Island Arc
	continental-continental	Mountain Belt
Transform	in ocean	Offset in Ridge
	on land	Fault on Land

**Options:**

- Continental Volcanic Arc
- Oceanic Ridge
- Continental Rift Valley
- Offset in Ridge
- Fault on Land
- Mountain Belt
- Volcanic Island Arc

4. At divergent plate boundaries...
  - a. old seafloor is destroyed
  - b. **new seafloor is created**
  - c. seafloor is neither created nor destroyed
  
5. At convergent plate boundaries...
  - a. **old seafloor is destroyed**
  - b. new seafloor is created
  - c. seafloor is neither created nor destroyed
  
6. At transform plate (fault) boundaries...
  - a. old seafloor is destroyed
  - b. new seafloor is created
  - c. **seafloor is neither created nor destroyed**