Header (+1) Title: Plate Tectonics and Boundaries	**Page:**
MS-ESS2-2: Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.	**Date:**

Essential Question: What is the theory of plate tectonics? What are the three types of plate boundaries? What formations does each boundary type create?

Main Ideas Drawing (+1)	**Student Notes (+1)**
• Theory of Plate Tectonics • Formations • Plate Boundaries 1. Divergent Boundaries 2. Convergent Boundaries *(3 types)* A. Ocean collide with continent B. Two Oceans collide C. Two Continents collide 3. Transform Boundaries • Hot Spots	• Pieces of the Earth's lithosphere –solid crust and upper mantle--constantly move, driven by convection currents in the mantle. • Plate movement forms mountains, volcanoes, earthquakes and deep ocean trenches. • The edge of Earth's plates meet at plate boundaries. There are around 12 major plates. 1. Plates move apart forming a rift valley. Examples: Mid-ocean ridges and the Great Rift Valley. 2. Plates collide or smash together. A. Dense, ocean floor plate pushes down into mantle re-melting crust. Formations: Volcanic mountains, deep trenches; example: Mount Saint Helen, Mount Lascar B. Older, denser plate is pushed down (subduction) under the younger. Formation: deep trench; Island arc of volcanoes. Examples: Tonga Trench, Philippine Islands C. No subduction of plates; collision causes crust to crumple up to form mountains; examples: Himalayan Mountains and the Alps 3. Plates side-slip past each other. Many earthquakes occur. Examples: San Andreas Fault • Weak spots around the crust where magma flows to the surface; example: Hawaii

Summary (+1): In 3-5 sentences, answer the essential question:

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Question (+1):

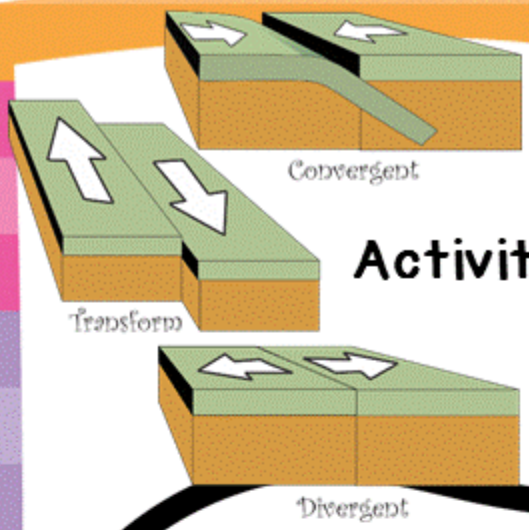
Header (+1) Title:	**Page:**
MS-ESS2-2:	**Date:**

Essential Question: What is the theory of plate tectonics? What are the three types of plate boundaries? What formations does each boundary type create?

Main Ideas Drawing (+1)	**Student Notes (+1)**
• Theory of Plate Tectonics	• Pieces of the Earth's _____ –solid crust and upper mantle--constantly _____, driven by convection currents in the mantle.
• Formations	• Plate movement forms _____, volcanoes, _____ and deep ocean trenches.
• Plate Boundaries	• The _____ of Earth's _____ meet at plate boundaries. There are around __ major _____.
1. Divergent Boundaries	**1.** Plates _____ _____ forming a _____ ____. Examples: _____ _____ _____and the Great Rift Valley.
2. Convergent Boundaries *(3 types)*	**2.** Plates _____or smash together.
A. Ocean collide with continent	**A.** _____, _____ floor plate pushes _____ into mantle re-melting crust. Formations: Volcanic mountains, deep _____. Example: _____ _____ _____, Mount Lascar
B. Two Oceans collide	**B.** Older, denser _____ is pushed _____ (subduction) under the _____. Formation: _____ _____; Island arc of volcanoes; examples: Tonga Trench, _____Islands.
C. Two Continents collide	**C.** No subduction of plates; _____causes crust to crumple up to form _____; examples: _____Mountains and the Alps.
3. Transform Boundaries	**3.** Plates _____-_____past each other. Many _____occur. Examples: ____ _____ _____
• Hot Spots	• _____spots around the _____ where _____ flows to the _____. Example: _____.

Summary (+1): In 3-5 sentences, answer the essential question:

Question (+1):



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Activity: Plate Boundary Chart Challenge

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1. **Written Portion** (+1): Complete the chart by drawing a picture, land features that result from plate movements, and specific examples of Earth's features. ***Challenge***: Research other examples not included in Cornell notes.

2. **Art** (+1): Draw and label the three different plate boundaries and include arrows to illustrate the movement of the plates. ***Challenge***: include resulting Earth's features.

3. **Color** (+1): Use at least four different colors effectively.

4. **Reflection** (+1): In three to five sentences using at least 3 different vocabulary words (highlight), compare and contrast the three different plate boundaries. *Starter sentence:*
   - *"_____ boundaries move ____ (describe direction of movement) where as _____ boundaries move____ (describe)."*

5. **Excellent (+1)**: produce a quality piece of work by demonstrating critical thinking.

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Activity: Plate Boundary Chart Challenge

Plate Boundaries	Picture/ Movement (arrows)	Land Feature	Examples
Divergent			
Convergent			
Ocean-Continent			
Ocean-Ocean			
Continent-Continent			
Transform