

**Concept Development**

An **earthquake** is a seismic<sub>2</sub> activity caused by lithospheric<sub>3</sub> plates moving against each other.

- Most earthquakes occur near the edge of the plates.

**Plate motion** is the movement of the lithospheric plates.

- There are 20 large, rigid<sub>4</sub> plates that are constantly moving in different directions.

**Explain how earthquakes occur.**

**Plate boundaries** are the places where two plates meet. Depending on how each plate is moving, a different type of boundary is formed.

**Convergent boundaries**  
- one plate dives under another forming volcanoes and mountains.



**Divergent boundaries** - the plates pull away from each other forming ridges and rift valleys.



**Transform boundaries** - the plates slide past each other forming a fault line.



**Plate Motion Map**  
Notice the yellow arrows that show movement.



**CFU**

Look at the Plate Motion image. Where is an earthquake most likely to occur, location 1 or 2? How do you know?

Name two plates that have a convergent boundary.

Name two plates that have a divergent boundary.

Name two plates that have a transform boundary.

In your own words, what are plate boundaries? "Plate boundaries are \_\_\_\_\_"

In your own words, what is an earthquake? "An earthquake is \_\_\_\_\_"

**Vocabulary**

- <sup>2</sup> vibration of the Earth
- <sup>3</sup> the Earth's outermost layer
- <sup>4</sup> unbendable

Explain how earthquakes occur.