**Ch. 13 Forces that Shape the Earth Notes**

Essential Question: How is the Earth stressed and what happens when it is?

1. Stress – force that acts on rocks and change its shape or volume
	1. Adds potential energy to rock until it changes shape or breaks
	2. Types of Stress
		1. Tension – pulls on crust stretching rock so it becomes thinner in the middle



* + 1. Compression – squeezes rock until it folds or bends



* + 1. Shear – pushes a mass of rock in two opposite directions
1. Strain – a change in the shape of a rock cause by stress
	1. Types of Strain
		1. Elastic strain – change in rock that is not permanent
		2. Plastic strain – creates permanent change in rock shape (usually when rocks are weak or hot)
2. Landforms created by Compression
	1. Mountain ranges – collision between 2 continental plates 
	2. Ocean trenches – 1 plate goes under another
	3. Volcanic arcs – curved line of volcanoes that form parallel to plate boundaries



1. Landforms created by Tension
	1. Mid ocean ridge – tension causes ocean crust to spread allowing hot rock from mantle to rise creating high ridges
	2. Continental rifts – when divergent boundaries occur within a continent, they cause splits in the crust.
2. Landforms created by shearing
	1. Fault – break in the crust
		1. Transform faults – when plates slide horizontally past each other
		2. Fault zones – an area of many fractured pieces of crust along a large fault