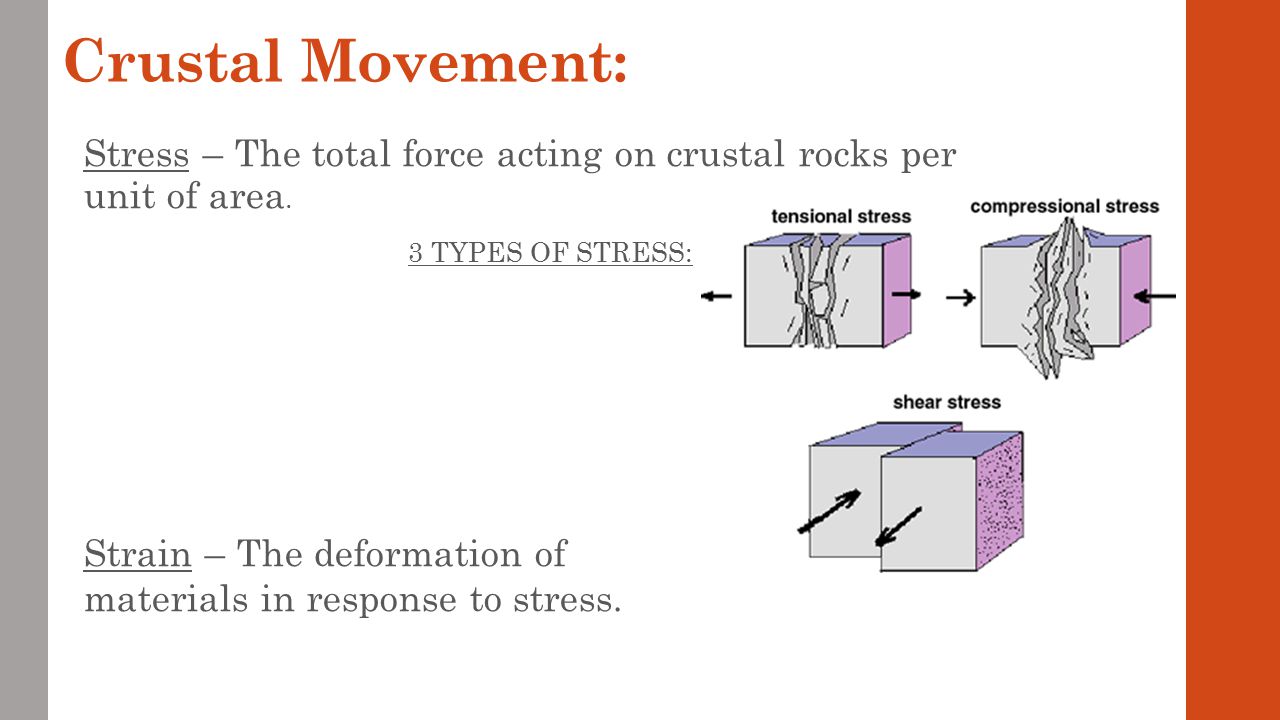
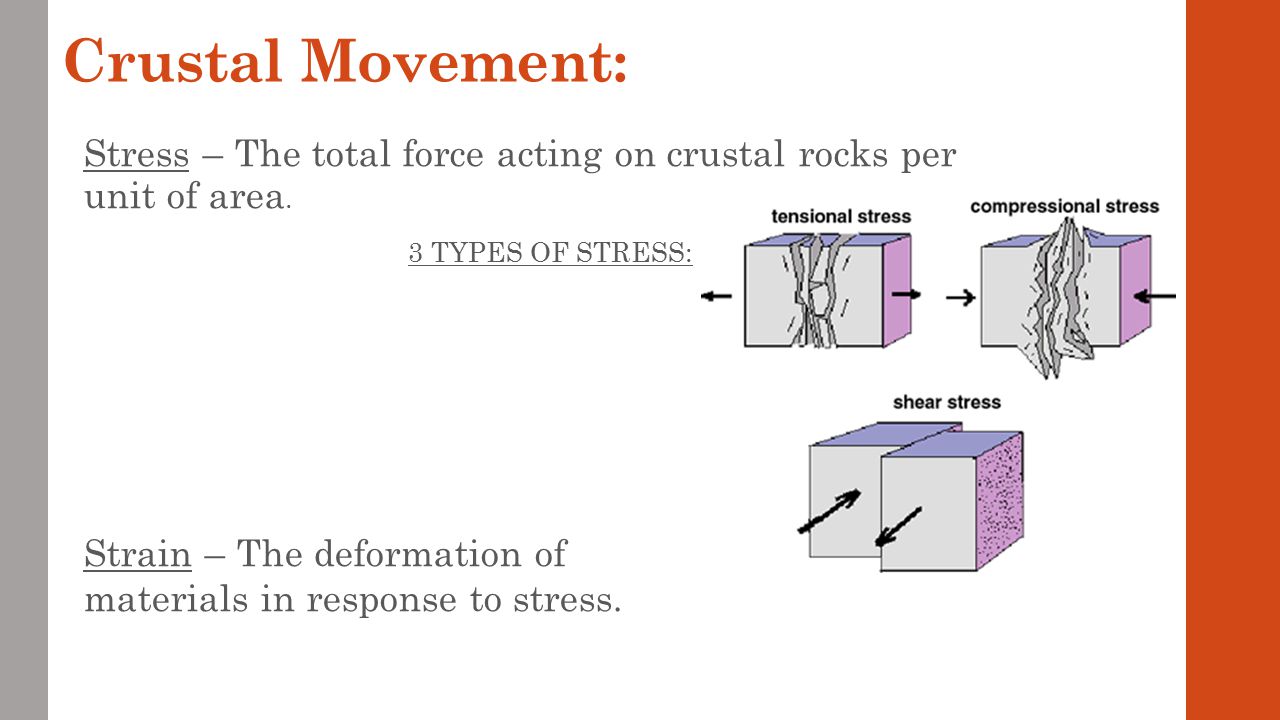
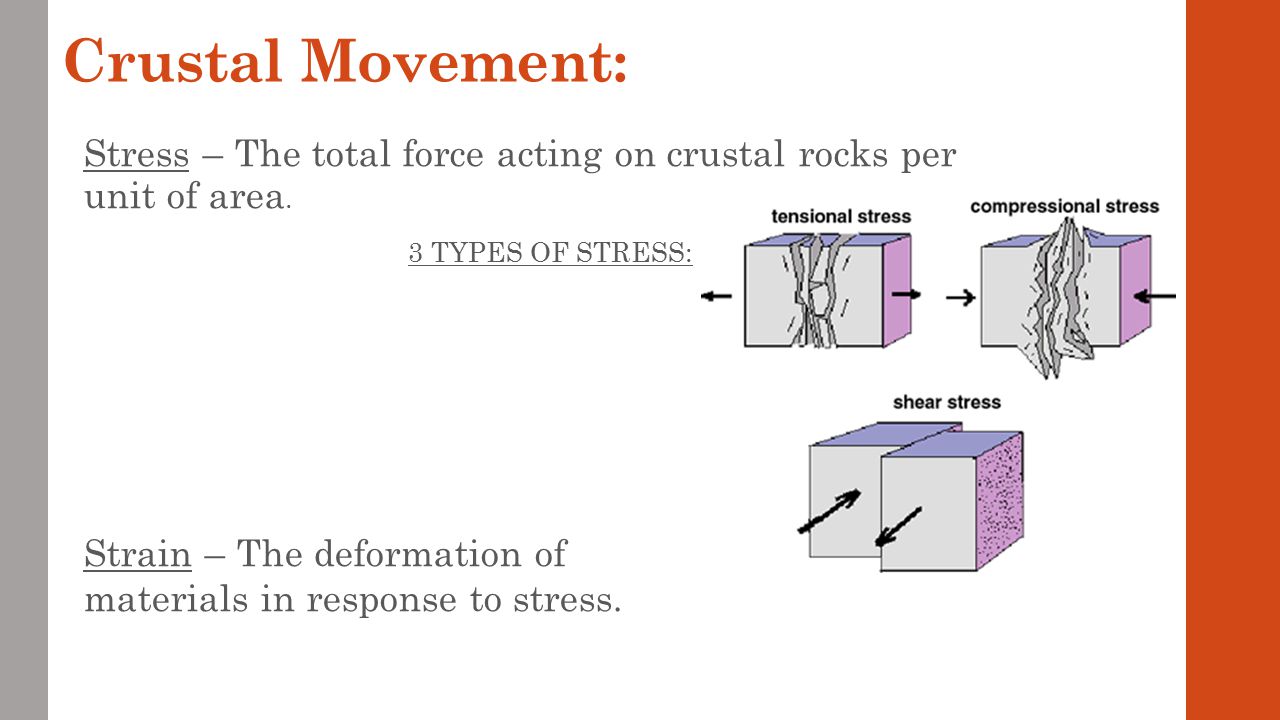
**Ch. 13 Forces that Shape the Earth Notes**

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

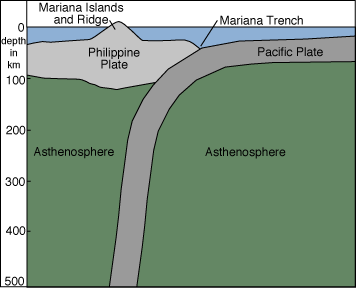
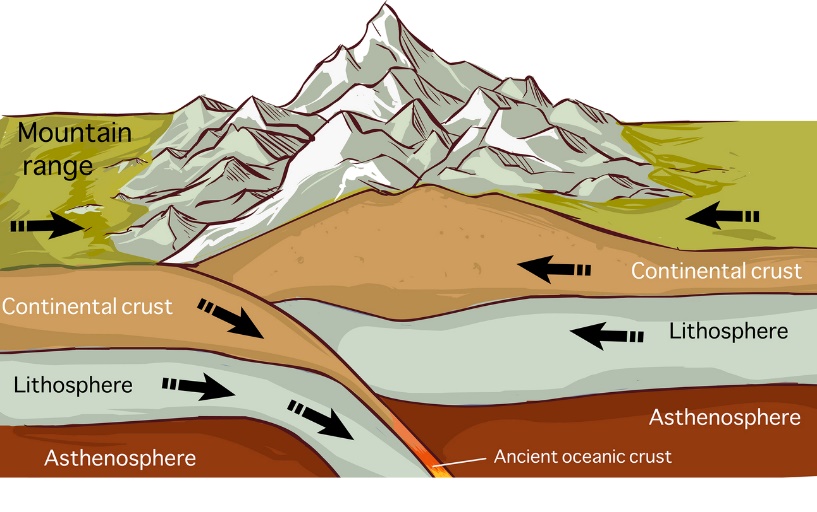
1. Stress – force that acts on rocks and change its shape or volume
   1. Adds potential energy to rock until it changes shape or breaks
   2. Types of Stress
      1. Tension – pulls on crust stretching rock so it becomes thinner in the middle

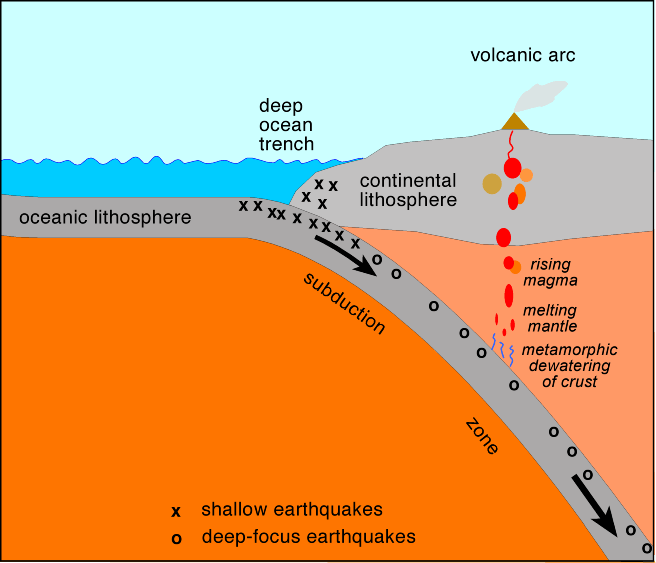


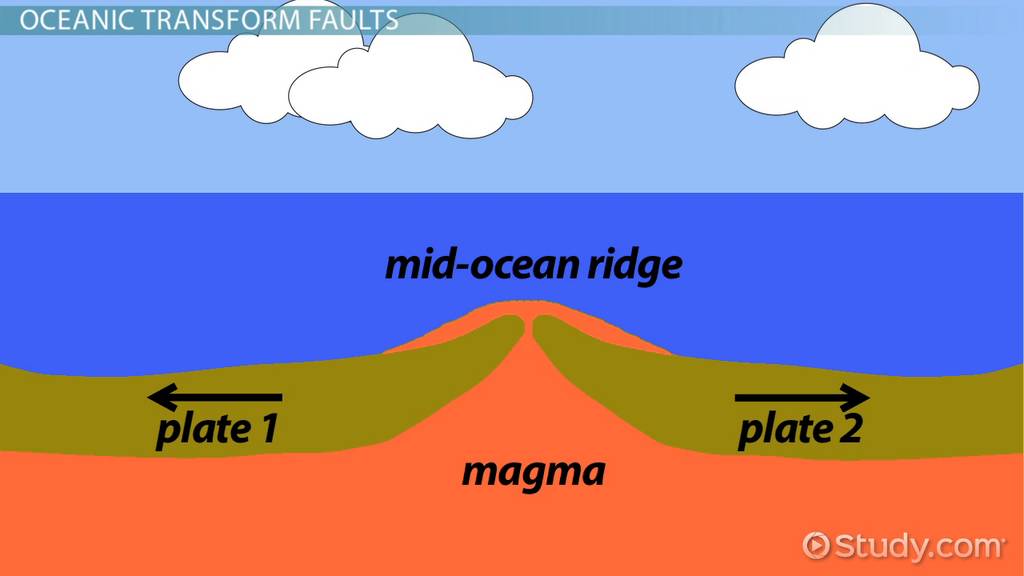
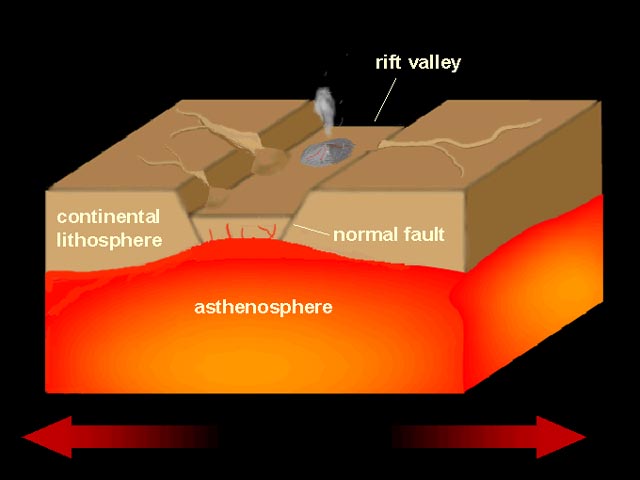
* + 1. Compression – squeezes rock until it folds or bends



* + 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