

So the basic concept is that heat inside the Earth drives motions, we have convection currents through which heat is dissipated from the interior of the Earth. Those convection currents then have an impact on what happens on the surface. So as the convection currents rise the surface of the Earth is actually fractured or ruptured and portions of the Earth's surface spread away from the rising convection current. That spreading drags the Earth's surface along and eventually back down to the interior of the Earth in what we call subduction zones. And this also drives the motion of the continents, what is sometimes referred to as continental drift. Sediments can accumulate on the continental margins, they get incorporated into mountain belts and then melting of the slab or of the mantle above it can lead to volcanoes such as we find in the Andes and Chile, or Mount St. Helens on the west coast of the United States. If we back off and look at what this looks like on a planetary scale, we see that the whole planet can be divided into a series of fragments, which we call plates, and it's the motion of those fragments, those plates, that explain Earthquakes, volcanos, and a host of other features about the planet that we live on.