

# Plate tectonic



**ASSIGN  
BUSTER**

Checkpoint: Plate Tectonic Theory For many, many years, people assumed that the Earth was the center of the universe and that everything revolved around the Earth.

However, in 1543, a man by the name of Nicolaus Copernicus stated that the Earth was not the center of the universe and in fact the planets revolve around the Sun and not Earth. Many may have ridiculed him for that but many years later it was proven that he was right in his theory. In 1912, a German meteorologist named Alfred Wegener had an idea, continental drift, that all the continents were once a supercontinent named Pangaea that over time had split into fragments and drifted into their present locations. But yet again, there was a lot of debate over this as well, but over time it was proven that he was correct. The process of mantle convection may sound complicated, but it is actually very simple. Mantle convection happens just the way water boils on the stove.

The water at the bottom of the pot is closer to the burners, so therefore it will be hotter than the water at the top. Once the water heats up, it becomes less dense and the water will rise to the top. When it reaches the surface, it cools down and starts moving sideways so the hot water has room to rise and process just repeats itself. It takes the Earth's mantle much longer to do this but it works the same way.