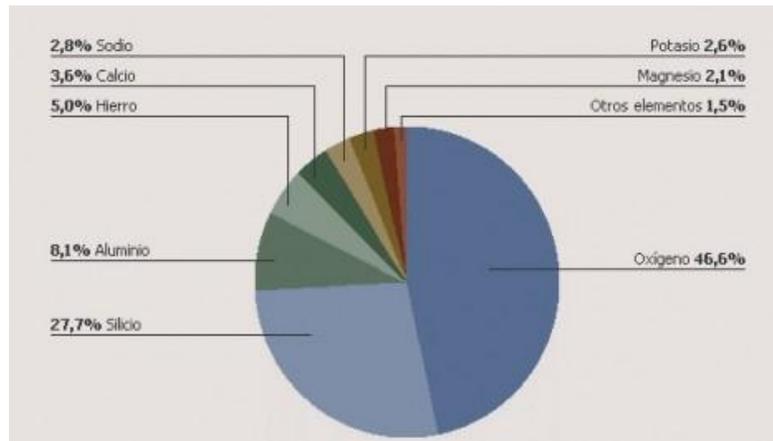
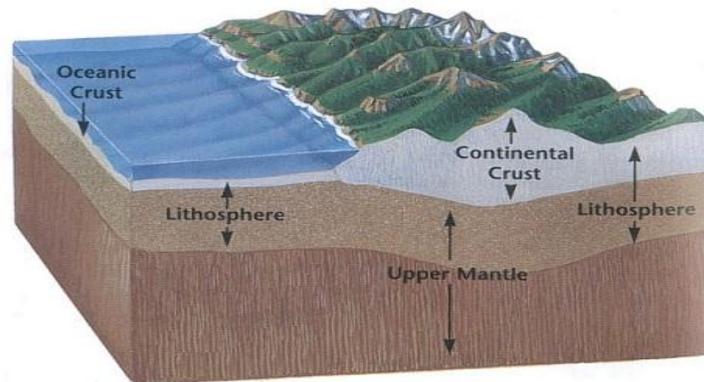


# COMPOSITION OF THE EARTH'S CRUST

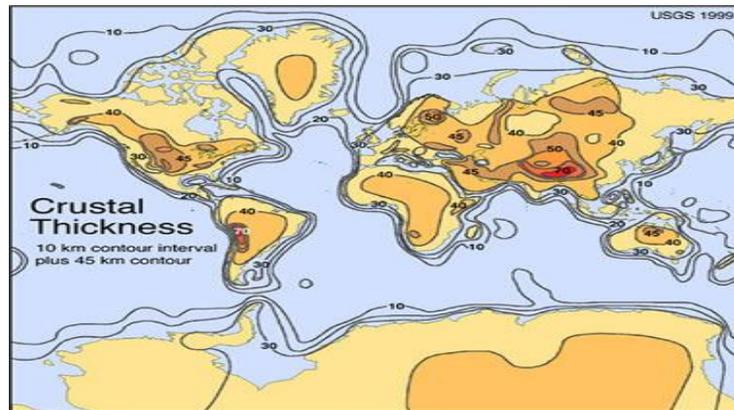


The earth's crust is the layers of Earth on which occur all forms of life occur by humans.

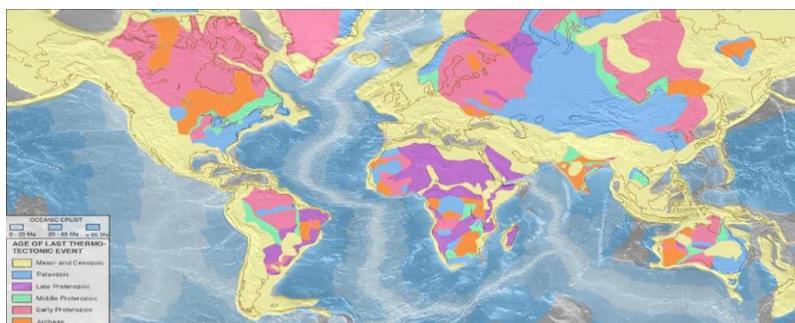


The crust is relatively thin and has probably been recycled and destroyed by strong tectonic movements and impacts of asteroids that were common in the early solar system.

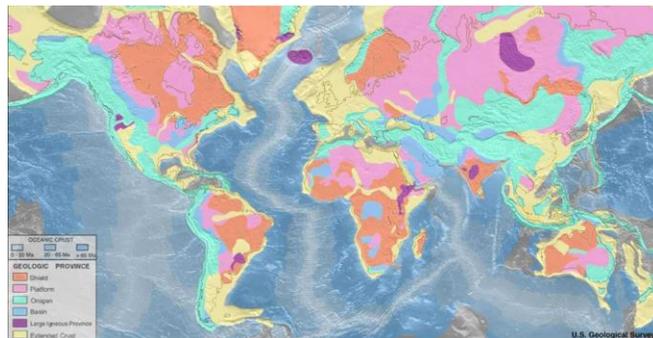
The crust is located at the top of the lithosphere with a thickness of 3 km (2 miles) and up to 100 km (60 miles). The average density in the upper crust is between 2.69 tons/m<sup>3</sup> and 2.74 tons/m<sup>3</sup> and the lower crust between 3 and 3.2 tons/m<sup>3</sup>.



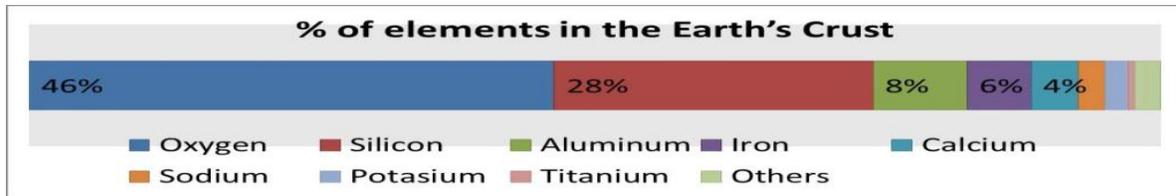
The age of the oldest oceanic crust in the sea is 200 million years old while the oldest continental rocks have been identified in a range between 3.7 and 4.3 billion years found in Australia and Canada formed in the Archaic period, so that estimated that the average age of the continental crust is about 2 billion years.



The Earth's crust is composed of a variety of igneous, metamorphic and sedimentary rocks like basalts and granites although on average can be said to be composed of a material similar to the andesite (volcanic extrusive igneous rock with about 60% of dioxides of silicon  $\text{SiO}_2$  and other minerals) and is enriched with incompatible elements with basaltic or volcanic ocean compared to the mantle.

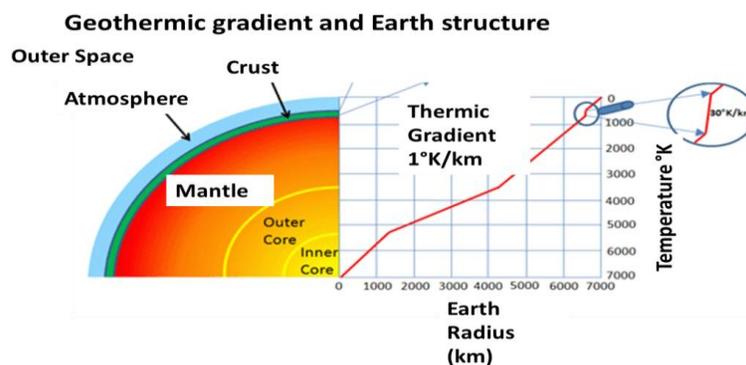


Regarding elements, the crust is made of oxygen-O (45%), silicon-Si (27%), aluminum-Al (8%), iron Fe (6%), calcium-Ca (5%), sodium-Na (3%), potassium-K (2%), magnesium (3%), titanium (1%) totaling 98.9% of the crust and other scarce elements.



Regarding compounds it is estimated that the surface of the crust has a composition of 61% silicon oxide ( $\text{SiO}_2$ ), 16% aluminum oxide ( $\text{Al}_2\text{O}_3$ ), 7% iron oxide ( $\text{FeO}$ ), 6% calcium oxide ( $\text{CaO}$ ), 5% magnesium oxide ( $\text{MgO}$ ), 3% sodium oxide ( $\text{Na}_2\text{O}$ ), 2% potassium oxide ( $\text{K}_2\text{O}$ ) and 1% titanium oxide ( $\text{TiO}_2$ )

The temperature of the crust increases with depth reaching values of up to  $200^\circ\text{C}$  and  $400^\circ\text{C}$  at the edge of the upper mantle. The temperature rises to  $30^\circ\text{C}$  for each kilometer of depth on the crust.



Source: <http://www.artinaid.com/2013/04/composition-of-the-earths-crust/>