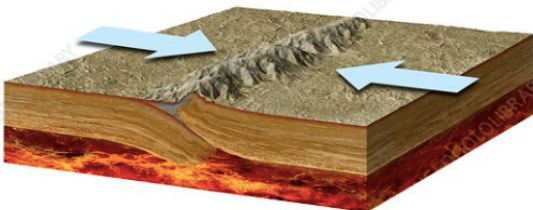


The Structure of Our Earth

- Earth's crust or outer layer has different pieces called plates.
- These plates move over time - moving plates can cause earthquakes, but sometimes it's too slow to notice.
- Liquid rock below the Earth's crust is known as magma and causes the plates to float and move. The area below the crust is known as the Mantle and is made from liquid rock.
- Beneath the mantle lies the Earth's outer and inner core.
- The core is made mostly of two common metals, iron and nickel - the outer core is more molten than the inner core.
- The core is about as hot as the sun – almost 6000 degrees Celsius.

Earth's Moving Crust

- An earthquake is shaking of the ground caused by a seismic wave.
- When plates push against each other, pressure and energy builds up and one plate can suddenly slip over, under, or alongside the other plate.
- The energy waves that are released are known as seismic waves.
- Magnitude scales that are used to measure and describe earthquakes.



Processes That Shape The Earth

Core Knowledge Science Year 5

Geology – The study of the Earth and how it changes over time.

Fossil – The remains of an organism preserved in rock form.

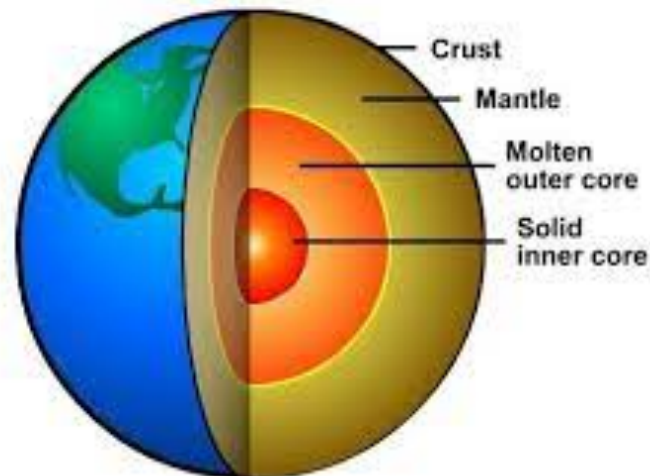
Plate – A large fragment of the Earth's crust and upper mantle.

Magma - Molten material from Earth's mantle below Earth's surface.

Igneous rock - rock made of magma or lava that has cooled and hardened.

Metamorphic rock – rock formed from sedimentary or igneous rock which has been put under tremendous heat or pressure.

Sedimentary rock - rock made of sediment compacted together.



Other Changes on Earth's Surface

- Tsunami - a gigantic wave of seawater caused by an earthquake in oceanic crust. It can travel as fast as 500 miles per hour.
- Most tsunamis occur around the Pacific Ocean, in what is known as the Ring of Fire.
- A landslide occurs from a collapse of a mass of earth or rock from a mountain or cliff.
- A volcano is a hill or mountain that forms over a crack in Earth's crust from which lava erupts.
- The crack leads down to a chamber, or huge space, filled with magma, which comes from the mantle.
- Tremendous pressure and heat in the mantle force magma in the chamber upward through the crack. If the pressure is great enough, magma erupts on the surface as lava.

Managing the Effects of Earth's Natural Processes

- Natural hazards are extreme events on Earth that are caused by nature and cause harm to humans.
- Disaster preparations, responses, and recoveries are designed by governments to reduce the harmful effects.
- GIS - Geographic Information System is the technology used by scientists to find out information about natural processes to keep people safe.