

☉ Relative Age Dating

Principle of Superposition:
comparison of dates

Principle of Lateral Continuity all rock formations thin out at the ends to have a lenticular shape

Relative Age: Unconformities

Non-comformity the boundary between igneous/metamorphic and sedimentary

Angular part of the formation is tilted but it is covered by a flat deposit

disconformity there is a gap in time between sedimentary layers

There are three types of unconformities that you can observe in rock formations

Minerals vs Non-Minerals

Is it inorganic? inorganic: not made of living things or the remains of living things

Does it occur naturally naturally: forms and exists in nature

Is it a Crystalline Solid A crystalline solid is where its atoms are arranged in an orderly way

Consistent chem. comp. for each atom of this, there are atoms of this

If yes to all 4 questions, it is a mineral. Otherwise, it is not a mineral.

Silicates and Non-Silicates

Silicates

Silicon + Oxygen + feldspar, potassium, or sodium is a silicate

Feldspar is the most common case of silicates

96% of the Earth's crust is composed of Silicates 50% of the silicates are Feldspar and quartz

Non-silicates

non-silicates are basically the rest of the minerals that are not silicates

They make up the rest 4% of the Earth's crust

They are split into 6 groups

Carbonates CO₃

Halides Cl or F + Na, K, or Ca

Native elements uncombined

Oxides O + anything but Si

Sulfates SO₄

Sulfides S + I + anything else

Earthquakes

How earthquakes start: stress builds up at fault to the point where it is *locked* when pressure gets too great, the rocks slip and create the earthquake

Elastic rebound like a slinky, it deforms then settles back to its original spot

Seismic Waves

Earthquakes (cont)

Body Wave travels through the middle of the bodies

P-waves can go through solids, liquids, and gases and faster than S-waves

S-waves can only go through solids and slower than P-waves

Surface Wave travels along the surface of the body

Rayleigh Waves elliptical rolling motions

Love Waves side-to-side

Shadow zones Parts of the Earth where body waves can't reach