

Evidence of Evolution

* Evolution = Change over time

Geologic Evolution = change of Earth over time (4.6 billion yrs)

Organic Evolution = change of organisms (600 million yrs)

① - fossils

* molds - hollow shape of the organism
(common in northeast)

found in sedimentary rock: shale

limestone
layers

* casts - copy of the organisms in stone

② - amber

* tree sap (usually pine tree sap)

bug & pollen - soft tissue

③ - ice

* preserves

* works for short term

④ imprints

* foot prints in mud → stone

tell weight, stride etc.



ex:



⑤ Tar

tar pits (LaBrea Tar Pits in CA)

10,000 - 40,000 yrs old

⑥ Petrification

turning living things to stone

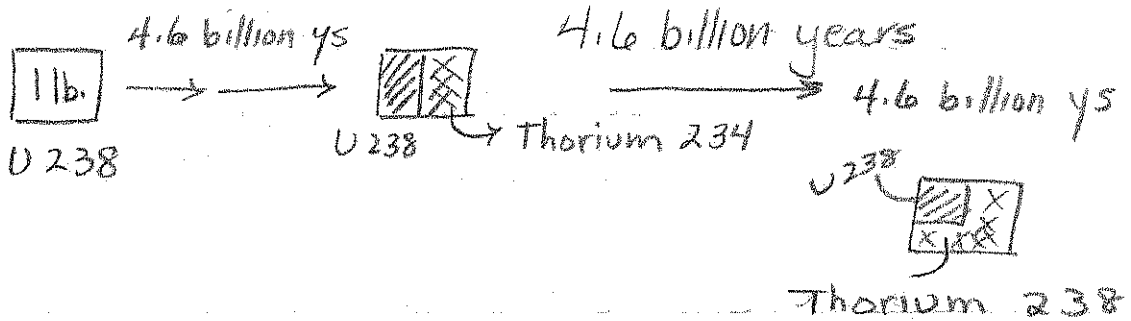
Biochemistry - DNA } short term
Anatomy }

Homologous & Analogous

Dating Fossils

① Radio active dating

absolute dating - Uranium 238 - radioactive isotope
have half-life =



only used with igneous rock -
lava - molton

↓
1/8 → 1/16 → 1/32 → 1/64

• Can't date ALL the rock because molten

Sedimentary

Lava

5 mill

} relative dating

Sedimentary

Lava

Lava

10 mill

Index fossil

absolute dating * (2) Carbon 14

has a half-life 5735 yrs
used on things that were living

Carbon 12 - most common & in everything
- also take in C14 when living
slowly converts to N¹⁴ (nitrogen 14)
& can get date

C12 → [C14] → [N14] → Date

good for dating to about → 50,000 yrs

