

Dating Notes or (How do _____ figure out how old _____ is?)

When an organism _____ it typically _____ or is _____ by other organisms, but under the right _____ it can become a fossil.

Paleontologists study fossils which are _____ or _____ of an organism that lived long ago.

Fossils can be in _____ or in amber. _____ is hardened _____.

_____ are any fossilized evidence of animal activity. These fossils provide us with information about the _____ of extinct animals.

The _____ is the collection of all of the fossils that have been found throughout the world.

Relative Dating

Scientists use relative dating to estimate _____ fossils are.

Fossils and rocks found in _____ layers of sediment are thought to be _____ in age. Fossils and rocks found in _____ layers of sediment are thought to be _____ in age.

Absolute Dating

All _____, including rocks, are made of tiny particles called _____.

Most elements are _____, but some are not. These unstable atoms break down, or _____, into other elements. This process is called _____.

The _____ of decay for each element is _____. This rate of decay is the element's _____.

The half-life of a radioactive element is the _____ it takes for _____ of the unstable _____ to decay.

_____ is used to date once living organisms. Carbon-14 has a half-life of _____. Scientists calculate the number of carbon-14 atoms _____ in the fossil to determine _____ it is.

Rocks are not _____ and have never been alive, so they _____ contain carbon-14.

They use other elements like _____ and _____.

Dating Notes or (How do scientists figure out how old something is?)

When an organism dies it typically decays or is eaten by other organisms, but under the right conditions it can become a fossil.

Paleontologists study fossils which are traces or remains of an organism that lived long ago.

Fossils can be in rock or in amber. Amber is hardened tree sap.

Trace fossils are any fossilized evidence of animal activity. These fossils provide us with information about the behavior of extinct animals.

The Fossil record is the collection of all of the fossils that have been found throughout the world.

Relative Dating

Scientists use relative dating to estimate how old fossils are.

Fossils and rocks found in higher layers of sediment are thought to be younger in age. Fossils and rocks found in lower layers of sediment are thought to be older in age.

Absolute Dating

All matter, including rocks, are made of tiny particles called atoms.

Most elements are stable, but some are not. These unstable atoms break down, or decay, into other elements. This process is called radioactive decay.

The Rate of decay for each element is constant. This rate of decay is the element's half life.

The half-life of a radioactive element is the time it takes for half of the unstable atom to decay.

Carbon 14 is used to date once living organisms. Carbon-14 has a half-life of 5730 years. Scientists calculate the number of carbon-14 atoms left in the fossil to determine how old it is.

Rocks are not alive and have never been alive, so they don't contain carbon-14.

They use other elements like potassium and uranium.