

Chapter 12

Text Pages 344-349

STUDY GUIDE

● Absolute Ages of Rocks

Use the words in the boxes to fill in the blanks.

absolute dating
age
atoms

element
isotopes
lead-206

neutrons
radioactive
uranium-238

Besides relative dating, geologists use another method to determine in years the _____ of rocks and other objects. It's called _____.

It's a process that uses the properties of the _____ in objects.

Elements can have atoms with different numbers of _____ in their nuclei. Some of these _____ undergo a process of _____ decay. When the isotope decays, a new _____ is formed. An example of this decay is the change of the isotope _____ to _____.

carbon-14
daughter product
half-life

nitrogen-14
parent material

radiometric dating
uniformitarianism

Another example of decaying isotopes is the isotope _____, which decays to _____. The original isotope in this process is called the _____. The isotope that results from the decay is the _____.

Every radioactive _____ has a certain rate at which it decays to its _____. This rate is known as its _____.

Calculating the absolute age of a rock is called _____. Long before this was possible, a Scottish scientist estimated that Earth was millions of years old. He used the principle called _____, which states that Earth's processes occurring today are similar to those that occurred in the past.