

Note-taking Worksheet (continued)

C. _____—gaps in rock layers

1. _____ unconformity—rock layers are tilted, and younger sediment layers are deposited horizontally on top of the eroded and tilted layers.
2. A layer of horizontal rock once exposed and eroded before younger rocks formed over it is called a _____.
3. _____—sedimentary rock forms over eroded metamorphic or igneous rock.

D. The same rock layers can be found in different locations; fossils can be used to _____ those rock layers.

Section 3 Absolute Ages of Rocks

A. _____—age, in years, of a rock or other object; determined by properties of atoms

B. Unstable isotopes break down into other isotopes and particles in the process of _____ decay.

1. _____—an isotope's neutron breaks down into a proton and an electron with the electron leaving the atom as a beta particle; a new element forms due to proton gain.
2. _____—an isotope gives off two protons and two neutrons as an alpha particle; a new element forms.
3. The time it takes for half the atoms in an isotope to decay is the isotope's _____.

C. Calculating the absolute age of a rock using the ratio of parent isotope to daughter product and the half-life of the parent is called **radiometric** _____.

1. _____ dating is used to date ancient rocks millions of years old.
2. _____ dating is used to date bones, wood, and charcoal up to 75,000 years old.
3. Earth is estimated to be about 4.5 billion years old; the oldest known rocks are about _____ years old.

D. _____—Earth processes occurring today are similar to those that occurred in the past.