ESS 200 (Stapleton) Name: _____
Rock Dating Terminology and Background Information

Match the terms on the right to the descriptions below

A. Parent atom
B. Daughter Atom
C. Radioactive decay
D. Principle of Cross-Cutting Relationships
E. Absolute Dating
F. Sedimentary Rock
G. Principle of Superposition
H. Principle of Faunal Succession
I. Isotopes
J. Radioactive Isotope
K. Igneous Rock
L. Half-Life
M. Metamorphic Rock
N. Radiometric dating
O. Relative Dating

1. A rock that was formed by fully melting and then recrystallizing (solidifying).
2. A rock that formed from a layer of sediment that compacted and became solid over time.
3. A rock that was formed when an existing rock changed in some way by being squeezed and/or heated (but not completely melted).
4. Comparing or ranking rocks or rock layers by age
5. Determining the age of a rock in years.
6. The relative dating principle which says that younger rock layers are closer to the Earth's surface.
7. The relative dating principle which says that, if some object or event cuts or passes through another object, the object that gets cut is older than whatever did the cutting.
8. The relative dating principle which states that the fossils of extinct organisms (plants or animals) can be used to determine the ages of the rocks in which they are embedded. In short, rock layers containing similar fossils are likely to be of similar ages.
9. Two atoms are isotopes of one another if they are atoms of the same element, but they have different masses.
10. An isotope of an element that turns into a smaller, more stable isotope over time. [There are two words that match this description]
11. The process of a radioactive atom turning into another smaller atom and releasing radiation in the process.
12. what a radioactive isotope turns into when it decays
13. a method of absolute dating that uses the half-lives of radioactive isotopes in rocks to determine the ages of rocks.
14. The amount of time it takes for half of a mass of some radioactive isotope to decay into daughter atoms.

Short Answer (the actual test will have two of these):

15. **How do scientists decide which isotopes to use when they date rocks?**

16. **Why can only igneous rock be dated using radiometric dating?**

17. **Why does radioactive decay release radiation energy?**

18. **Why can't sedimentary rock layers be dated using radiometric dating?**