**Earth History Study Guide**

1. What is an ice core and what does it tell us?
2. Explain how rocks, fossils, and ice cores are used to tell the history of the earth.
3. Think back to the fossil card lab. When fossils of organisms slowly disappeared, what was the explanation for this?
4. Explain the law of superposition and how we are able to infer the ages of fossils in rock layers.
5. Explain the difference between trace fossils and cast or molds.
6. What is a geological fault? How can you tell if samples of sedimentary rock have been affected by a fault?
7. What is an intrusion and how do we know the age of an intrusion, relative to the ages of the layers of rock around the intrusion?
8. What is an index fossil and how is it used to determine the relative age of rocks?
9. How is carbon dioxide frozen in an ice core related to temperature/climate?
10. How can the age of a fossil be compared to the age of the layer of sedimentary rock in which it is found?
11. What is radioactive decay and how is it used to determine the absolute ago of a fossil?
12. If similar fossils are found in rock layers at different locations around the world, explain what this means about the ages of both rock layers.
13. What is half-life?
14. It takes \_\_\_\_\_ half-lives to get to 50% of the original sample. It takes \_\_\_\_ half-lives to get to 25% of the original sample. It takes \_\_\_\_half-lives to get to 12.5% of the original sample. It takes \_\_\_\_half-lives to get to 6.25% of the original sample.
15. If the half-life of a substance is 2 million years, how old is a fossil that contains 6.25% of the original sample of carbon? Explain your answer.
16. Explain the different between relative and absolute dating and provide an example of each.