

Name: _____

Date: _____ Per.: _____

Understanding Geologic Time

Use the “Understanding Geologic Time” interactive on the UCMP “Explorations Through Time” webpage (<http://www.ucmp.berkeley.edu/education/explotime.html>) to answer the following questions.

1. How many pages would be in the “A History of the Earth” book if each page represented 10,000 years of Earth history? _____
2. For the events listed below, fill in how many years ago the event happened, and what page it would be on in the “A History of the Earth” book.

Event	Years ago	Page # in book
Formation of the Earth and Moon		
Earliest life appears		
Early land plants		
Largest mass extinction		
Dinosaur extinction		
Early hominid “Lucy”		

3. What is the difference between relative date and absolute date? (Use the U.S. history timeline you create to help answer this question.)
4. What is the Law of Superposition?

5. Fill in the following information for the fossils shown in step 7 of the activity.

Fossil	Fact about the organism	Date the fossil:
Trilobite		First appeared:
Brachiopods		Height of diversity:
Eurypterids		Went extinct:
Ammonites		Went extinct:

6. Which of the fossils is the earliest (oldest)? _____
7. What is radiometric dating, and what does it tell us?
8. Based on the data from the radiometric dating of the volcanic ash layers, what is the age range for the layer of rock the ammonite fossils are found in? _____
9. The geologic time scale starts with the formation of the Earth. When did the Earth form?

10. Fill in the following information for the eons and eras in the geologic time scale.

Time Period		Fact	Millions of years ago
Eons	Phanerozoic		
	Proterozoic		
	Archean		
	Pre-archean		
Eras	Cenozoic		
	Mesozoic		
	Paleozoic		

11. Use the information from the geologic timeline to identify what period each of the following events occurred in.

- Animals first appear in the fossil record: _____
- Evidence of life on land: _____
- First trees and forests appear: _____
- Pangaea forms: _____
- Largest mass extinction occurs: _____
- Dinosaurs roam the earth: _____
- Dinosaurs go extinct: _____
- Mammoths, saber-toothed cats, giant sloths, humans, and ice ages (aka, when the movie "Ice Age" takes place): _____

