

## History of Earth Practice Problems

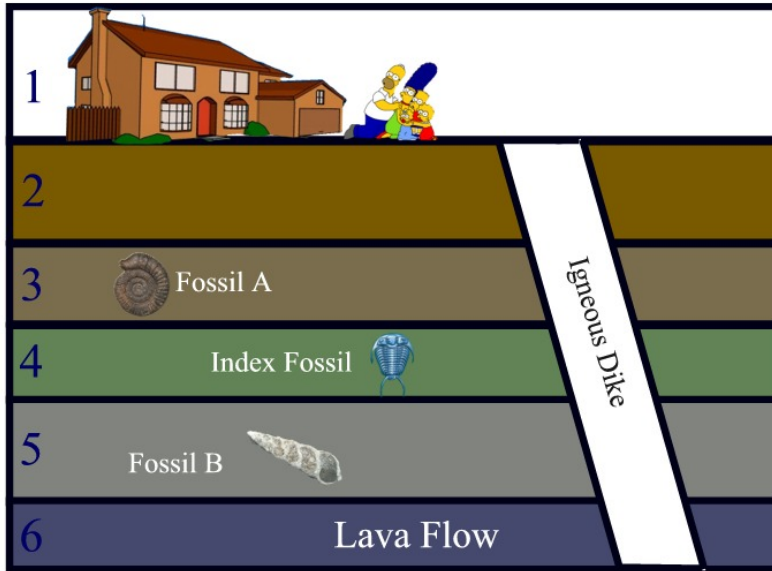
1. List the major eras in order.
2. For each era, list the periods or epochs in order.
3. When did each of the 5 major mass extinctions happen (between which periods)?
4. During which period(s) did animals move to land?
5. During which period(s) did dinosaurs rule the earth?
6. During which epoch(s) did the first modern humans appear?
7. What happened to change the concentration of oxygen in the earth's atmosphere?

## Radiometric Dating Practice Problems

1. If a rock is found containing *Agnostus* fossils, how old is it?
2. What is an index fossil?
3. Using the charts on the back of this sheet, what can you say about fossil A and fossil B? Be as specific as possible. The index fossil is a *Ceraurus*.
4. What is a half-life?
5. Make a chart showing the percentage of parent material and percentage of daughter material for 0-6 half lives.
6. The half-life for element A is 875 million years. How old is a sample that is 25% element A?
7. The half-life for element B is 250 million years. How old is a sample that is 3% element B?
8. A fossil is known to be 300 million years old. It is found in a rock that contains 12.5% parent isotope. What is the half life of the isotope?
9. Using the charts on the back of this sheet, lava flow from sedimentary rock contains a radioactive element with a half-life of 175 million years. 13% of parent isotope and 87% of daughter isotope were measured. How old is the lava flow?
- 10.

## Evidence for Evolution Practice Problems

1. What are homologous and analogous structures? Give an example of each. What do they tell us about evolution?
2. What are vestigial structures? Give 2 examples. What do they tell us about evolution?
3. How does biogeography affect the way organisms change over time?
4. Using an example, explain how embryology can give us information about evolution.
5. Using the example of whales from the video, how is the fossil record used to support evolution?
6. Using an example, explain how biochemistry can give us information about evolution.



<b>PALEOZOIC</b>	Permian	
	Carboniferous	Pennsylvanian
		Mississippian
	Devonian	
	Silurian	
	Ordovician	
	Cambrian	

Cambrian: 543-490 mya  
 Ordovician: 490-443 mya  
 Silurian: 443-417 mya  
 Devonian: 417-354 mya



Agnostus  
Cambrian



Dalmanites  
Silurian-Devonian



Ceraurus  
Ordovician