

9.5/10 Well done!

# Ch 14 Outline

## Section 1 Essential Questions

- ① ~~Q1~~ What are the similarities and differences between Earth's early environment and Earth's current environment? Earth's early environment and the environment now are similar in the fact that they both have volcanoes and rocks. Also the atmosphere had a lot of the same gases. They are different because there probably wasn't any life, and there ~~was~~ were a lot more volcanoes. It was also a lot hotter. The ~~environment~~ ~~environment~~ Earth also had lighter elements in the early environment. Lastly Early Earth probably didn't have oxygen.
- ② What is a typical sequence of events in fossilization? The typical sequence is: the organism dies, or is buried by sediment, the sediment builds up until they cover the organism's remains, minerals replace, or fill in the pore space of the bones and hard parts of organism, and then the sediments eventually harden into rock.
- ③ How are the different techniques for dating fossils used? Relative dating is used by comparing rocks in other layers to get an estimate of age. Relative Dating uses the law of superposition. Radiometric dating uses the decay of radioactive isotopes to measure the age of rock.
- \* ④ What are the major events on the geological time scale?  
The major ~~events~~ events on the geological time scale are

(See chart p. 397)

## Section 1

### Vocab

K-T boundary: layer of iridium-rich material between rocks of the cretaceous period and rocks of the Paleogene period that provides evidence of meteorite impact.

↓ continue on back

Half-life: amount of time required for half of a radioactive isotope to decay.

Cambrian Explosion: rapid diversification of most major animal groups marking the start of the Paleozoic era.

## Section 2 Essential Questions

1) What is the difference between spontaneous generation and biogenesis? Spontaneous generation is the idea that life arises from nonlife. Biogenesis is the idea that only living organisms can produce other living organisms.

2) What might have been the sequence of events that led to cellular life? The sequence of events that might have led to cellular life is that complex organic molecules were gathered from simpler. Eventually, simple metabolic pathways developed. Then this allowed molecules to be broken down more ~~efficiently~~ efficiently.

3) What is the endosymbiont theory? - The endosymbiont theory is the theory that the ancestors of eukaryotic cells lived in association with prokaryotic cells. Prokaryotes might have lived inside eukaryotes and eventually the relationship became beneficial and the prokaryotes became organelles in eukaryotic cells.

## Section 2 Vocab

Spontaneous generation: the idea that life arises from non-life.

Theory of biogenesis: only living organisms can produce other living organisms.

Endosymbiont theory: the ancestors of eukaryotic cells lived in association w/ prokaryotic cells.