

Chapter

14

The History of Life

Critical Thinking

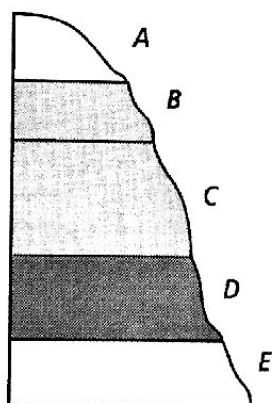
Use with Chapter 14, Section 14.1

Using the Law of Superposition

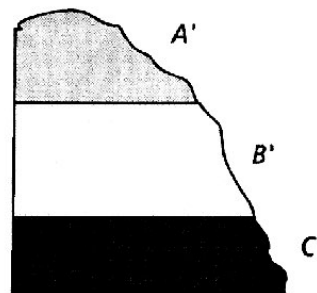
The geological law of superposition states that older layers of sedimentary rock lay beneath younger layers. Scientists use this law to determine the order in which organisms appeared and disappeared in the fossil record. The law cannot be used to determine the absolute ages of rock

layers. It can be used to determine the relative ages of rock layers by comparing their fossil records. Use the diagrams below, which represent neighboring sedimentary rock formations, to answer the questions that follow.

Formation 1



Formation 2



1. Which layer is the oldest in each formation? How would you know if these two layers are the same age?

2. Suppose fossils from layer C' in Formation 2 are the same as fossils from layer D in Formation 1. What could you say about the age of fossils from Layer E?

3. Suppose you also found that layers C and B' shared similar fossils. Layers B and A' look very similar, but contain no fossils. What could you say about the relative ages of all layers of both formations?

4. Suggest one or more geological events that might explain why Formation 2 has fewer layers than Formation 1.

