

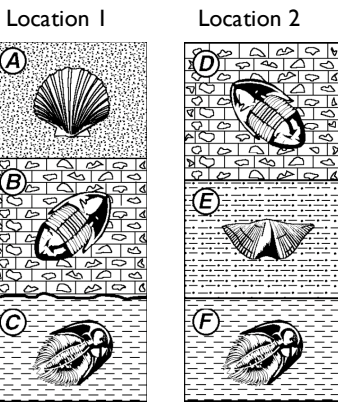
AIM: What does the fossil record tell us about our geologic history?

Do Now:





- 1) What is correlation? _____
- 2) What are four ways we can correlate different rocks? _____
- 3) What method would you use to find the absolute age of an index fossil? _____
- 4) During which time period would you find a rock with both trilobite and nautiloid fossils? _____

Correlation:

1) The diagrams show the outcrops at two different locations. Examine it carefully and answer the questions next to the diagrams.



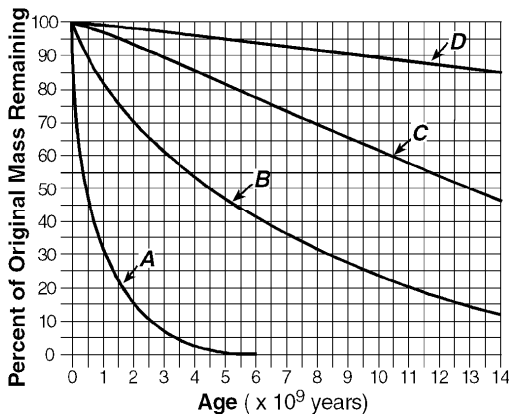
- 1) Which layer from location 2 correlates with layer B from location 1? _____ How do you know? _____
- 2) Which layer from location 2 correlates with layer C from location 1? _____
- 3) Why doesn't location 1 have a matching layer for layer E in location 2? Explain your answer in detail. _____
- 4) Label the fossils below in order of oldest to youngest with 1 being the oldest and 4 being the youngest.

- 5) What are 2 important characteristics for index fossils to have? _____
- 6) What method would a scientist use to find the absolute age of a fossil or a rock? _____

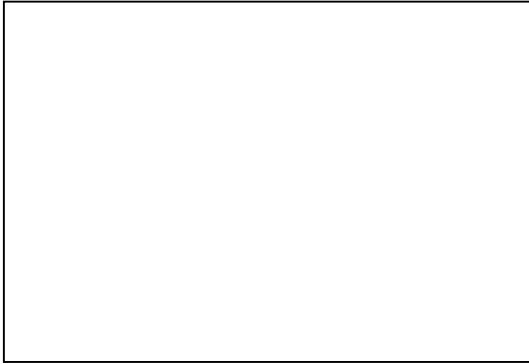
Half-life:

7) A scientist tested the fossils to see the percentage of 4 radioactive isotopes remaining in the fossils. Look at the graph carefully and answer the questions.



- a) What is the half-life of radioactive isotope A? _____
- b) If a fossil had about 25% of radioactive isotope B remaining, how old is this fossil? _____
- c) Out of the four radioactive isotopes, which isotope has the longest half-life? _____ Shortest half-life? _____
- d) What is the definition of half-life? _____
- e) Write this statement over again: THE HALF-LIFE OF A RADIOACTIVE ISOTOPE IS THE SAME IN ALL TYPES & SIZES OF ROCKS _____

Interpreting Block Diagrams: Use the play dough at your table to make into thin layers. You can deposit layers on top of each other, cause faulting, cause folding, make unconformities (represented by strips of index cards. Record each step of what you do. Then draw your final product in the block diagram below. Label your layers with letters or numbers to make it easier to write out the steps.



Events in order from oldest to youngest:

Bill Nye Video Greatest Discoveries:

- 1) What is the KT boundary? _____

- 2) What element can be found in the clay from the KT boundary? _____
- 3) According to Alvarez, how did this element spread across the surface of Earth? _____

- 4) What were the effects of this impact? _____

- 5) What is a crater? Draw a picture. _____



- 6) What is an alternative hypothesis about the cause of the dinosaurs' extinction? _____

Homework:

- 1) During which time period did the earliest land plants appear on Earth? _____
- 2) During which time periods did dinosaurs live on Earth? _____
- 3) What happened to life on Earth about 65 million years ago? _____
- 4) Shark and coral fossils are found in the rock record of certain land areas. What does the presence of these fossils indicate about those areas?
 - a. They have undergone glacial deposition
 - b. They were once covered by thick vegetation
 - c. They have undergone intense metamorphism
 - d. They were once covered by shallow seas
- 5) You must use pg. 2, pg. 3, and pgs. 8-9 to answer this question. Which of the following landscape features of NY state were most recently formed?
 - a. The Finger Lakes
 - b. The Catskills
 - c. The Palisades sill
 - d. The rocks of the Adirondack Mountains

Explain in detail how you reached this answer: