

Name _____

Date _____ Period _____

Rock Detectives—Questions

Use Rock Detectives Sheets 1, 2, and 3 to answer the following questions. Include the clue #you used to figure out your answer! Your clue can be the timeline.

_____ Clue # 1. Which of the following habitats was layer 1 a part of when it was laid down?
a. Forest
b. Freshwater marsh
c. Desert
d. Seashore
e. Saltwater pond

_____ Clue # 2. The scallop-like fossil in layers 2-5 is found in sediment all over the world. It's abundant everywhere it's found, but it always suddenly "drops out of the picture" after a certain point. What might have happened to the animal this fossil represents?

_____ Clue # 3. TRUE or FALSE: The rock in layers 6, 8, and 10 formed when sediment that had settled in the mouth of a river (or some other body of water) gradually was buried, pressed together, and cemented into rock.

_____ Clue # 4. In which layer would you expect to find the most coal? Explain your answer.

_____ Clue # 5. The igneous rock that makes up layer 8 contains the radioisotope called "fakium". If 50 percent of the fakium in the layer has changed to "hokium", how old is the layer?

_____ Clue # 6. What might one reason that the sea plant in layers 2-5 gradually evolved spines?

_____ Clue # 7. Look at layer 4 and compare the number of clockwise fossil snail shells to the number of counter-clockwise fossil shells. Based on your observations, what can you say about the climate of the area when layer 4 was laid down?

- _____ Clue # 8. TRUE or FALSE: Layers 6,8, and 10 probably were located near a volcano or some other area where magma was rising.
- _____ Clue # 9. Look at the tracks in layer 9. If you were told that the tracks showed that the larger animal captured and ate the smaller one, would you believe it? Why or why not?
- _____ Clue # 10. Based on the fact that the bone in the layer 11 belonged to a dinosaur and that gamlonia trees were present at the time, which of the following statements is most accurate?
- a. Layer 11 was laid down just as the dinosaurs were getting started.
 - b. Layer 11 was laid down about the time the dinosaurs were starting to die.
 - c. Layer 11 was laid down during the middle of the dinosaurs' reign as the most dominant animals on Earth.
- _____ Clue # 11. The fossil jawbone in layer 12 represents an animal who's remains are known from only one another location. This other location is thousands of miles away, on another continent. How would you explain how the fossils came to be located so far from each other? (Hint: Think of Pangaea!)
- _____ Clue # 12. Do you think the animal whose fossil jaw is in layer 12 was a plant eater or a meat eater?
- _____ Clue # 13. When layer 7 was forming, was the area a desert, ocean, swamp, tundra, or prairie? Explain your answer.
- _____ Clue # 14. If the area in which all of the layers occur is now mountainous, would you say that the fossils in layer 12 probably formed before or after the mountains pushed up? Explain your answer.

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