

# Directed Reading A

## Section: Relative Dating: Which Came First?

Write the letter of the correct answer in the space provided.

- \_\_\_\_\_ 1. Determining the age of objects or events in relation to other objects or events is called
- a. relative sequencing.
  - b. relative dating.
  - c. relative history.
  - d. relative geology.

### THE PRINCIPLE OF SUPERPOSITION

- \_\_\_\_\_ 2. As long as a sequence of rock layers is undisturbed, scientists know that
- a. older rocks lie above younger rocks.
  - b. younger rocks lie under older rocks.
  - c. younger rocks lie above older rocks.
  - d. older rocks have eroded away.
- \_\_\_\_\_ 3. The principle that states that younger rocks lie above other rocks in undisturbed sequences is called
- a. relative dating.
  - b. superposition.
  - c. uniformitarianism.
  - d. catastrophism.

4. How do disruptions of rock sequences pose a challenge to geologists?

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### THE GEOLOGIC COLUMN

5. What is the geologic column?

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6. How do geologists use the geologic column?

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**Directed Reading A *continued***

**DISTURBED ROCK LAYERS**

7. Explain how a crosscutting feature is always younger than the rock layers it cuts across.

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Match the correct description with the correct term. Write the letter in the space provided.

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|---|------------------|
| _____ 8. a break in the Earth's crust along which blocks of crust slide relative to one another | a. superposition |
| _____ 9. younger sediment deposited on top of older layers                                      | b. folding       |
| _____ 10. molten rock that has squeezed into existing rock and hardened                         | c. fault         |
| _____ 11. rock layers bent and buckled by the Earth's internal forces                           | d. tilting       |
| _____ 12. rock layers slanted by the Earth's internal forces but without folding                | e. intrusion     |

**GAPS IN THE RECORD—UNCONFORMITIES**

13. When a layer or several layers of rock are missing from a rock-layer sequence, this is called a(n) \_\_\_\_\_.

14. Name two possible explanations for a missing layer in a rock-layer sequence.

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15. When sediment stops at some point and restarts, an unconformity is created by \_\_\_\_\_.

16. An unconformity is created when an area is uplifted and exposed to \_\_\_\_\_ by wind and water.

**Directed Reading A *continued***

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**TYPES OF UNCONFORMITIES**

**Match the correct description with the correct term. Write the letter in the space provided.**

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|--|--------------------------------|
| _____ 17. found between horizontal layers of sedimentary rock and rock layers that have been tilted or folded          | <b>a.</b> disconformity        |
| _____ 18. where sedimentary rock layers lie on top of an eroded surface of older intrusive igneous or metamorphic rock | <b>b.</b> nonconformity        |
| _____ 19. most common type of unconformity   | <b>c.</b> angular unconformity |

**ROCK-LAYER PUZZLES**

**20.** How do geologists figure out rock-layer puzzles?

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