Introduction (p. 272)

Match the term with its definition.

Term	Definition
b 1. relative age	a. The number of years since the rock formed
a 2. absolute age	b. The age of a rock compared to the ages of other rocks

The Relative Age of Rocks *(continued)*

The Position of Rock Layers (p. 273)

3. According to the law of superposition, the oldest layer is at the bottom. Each higher layer is younger than the layers below it.

4. Is the following sentence true or false? The deeper one travels into the Grand Canyon, the younger the rocks become. false

Determining Relative Age (pp. 274–275)

5. Complete the table below about the clues that geologists use to find the relative ages of rocks.

Clues to the Relative Ages of Rocks		
Clue	**How It Forms**	**What Clue Tells Geologists**
Extrusion	a. Lava hardens on Earth's Surface	b. Rock layers below extrusions are always older.
Intrusion	c. Magma pushes into rock, then cools and hardens.	d. An intrusion is always younger than the rock layers around and beneath it.
Fault	e. Forces inside Earth cause the rock to move on opposite sides of a fault.	f. A fault is always younger than the rock it cuts through

6. A fault cuts through an extrusion. Which is older?_____

6. A fault cuts through an extrusion. Which is older? the extrusion

7. What is an unconformity?
An unconformity is a gap in the geologic record where new rock layers form above a much older rock surface.

8. Look carefully at Figure 6, "Unconformity," in your textbook. Then describe how an unconformity can form.

Sedimentary rocks form in horizontal layers. Folding tilts the rock layers. The surface is eroded. New sediment is deposited, forming new rock layers. The unconformity is the boundary where the new rock layers meet the old, eroded surface.

9. A rock contains inclusions. Which of the following is older?

a. the rock
b. the inclusions

Using Fossils to Date Rocks (pp. 276–277)

10. Geologists use index fossils to match rock layers in different locations.

11. Circle the letter of each sentence that is true about index fossils.

a. Index fossils must be found in many different areas.
b. Index fossils must represent an organism that lived for a very long time.
c. Index fossils tell the absolute ages of the rock layers in which they occur.
d. A type of ammonite that is different from other ammonites is a useful index fossil.