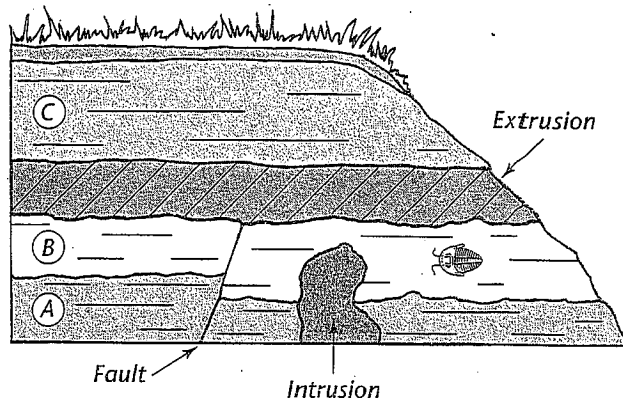


A Trip Through Geologic Time ▪ Review and Reinforce

The Relative Age of Rocks

Understanding Main Ideas

Use the figure below to answer questions 1–4. Write your answers on a separate sheet of paper.



1. What is the youngest rock layer? Explain.
2. Is the extrusion older or younger than rock layer B? Explain.
3. Is the fault older or younger than rock layer A? Explain.
4. How could a geologist use the fossil in rock layer B to date a rock layer in another location?

Building Vocabulary

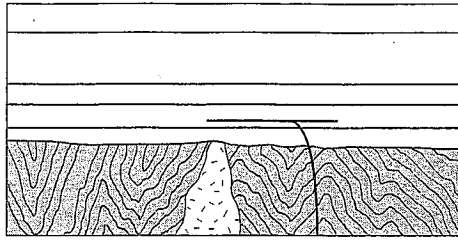
Match each term with its definition by writing the letter of the correct definition on the line next to the term.

- | | |
|-------------------------------|--|
| _____ 5. fault | a. the number of years since a rock has formed |
| _____ 6. extrusion | b. a break in Earth's crust |
| _____ 7. unconformity | c. the way to determine relative ages of rocks |
| _____ 8. relative age | d. a hardened layer of magma beneath Earth's surface |
| _____ 9. law of superposition | e. the age of a rock compared with the age of other rocks |
| _____ 10. intrusion | f. fossils used to help geologists match rock layers |
| _____ 11. absolute age | g. the surface where new rock layers meet a much older rock surface beneath them |
| _____ 12. index fossil | h. a hardened layer of lava on Earth's surface |

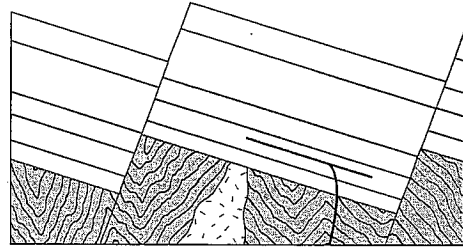
A Trip Through Geologic Time • Enrich

The Grandest Canyon of All

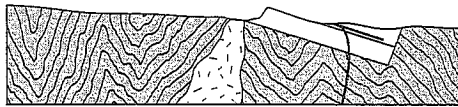
How did the Grand Canyon form? It formed through the processes that build up and wear down the surface of Earth. The figures below show how this majestic landscape came to be.



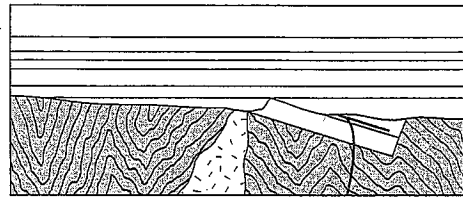
A Several sedimentary rock layers form over ancient rock.



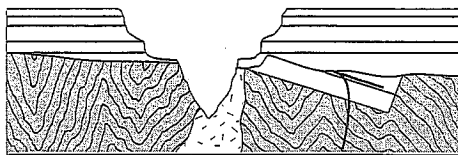
B Forces within Earth cause large faults, and layers of the sedimentary rock shift.



C Weathering and erosion wear down the whole area.



D More sedimentary rock layers form over the old, eroded surface.



E Finally, the Colorado River flows over the surface and cuts down through the layers of rock, forming the Grand Canyon.

Answer the following questions on a separate sheet of paper.

1. How do sedimentary rock layers form?
2. What happened to the sedimentary rock layers that first formed over the ancient rock?
3. Where in this sequence of events is the formation of an unconformity?
4. How did the Grand Canyon itself form?
5. Which is older, the Grand Canyon or the rock layers now exposed on the canyon walls? Explain your reasoning.