

**A Trip Through Geologic Time • Skills Lab**

# Finding Clues to Rock Layers

Fossil clues give geologists a good idea of what life on Earth was like millions or even billions of years ago.

## Problem

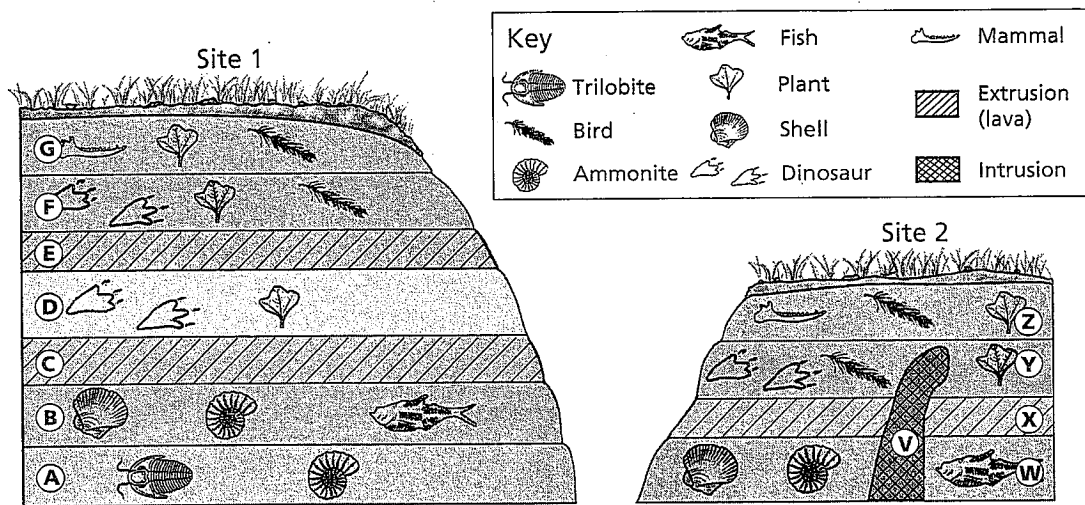
How can you use fossils and geologic features to interpret the relative ages of rock layers?

## Skills Focus

interpreting data, drawing conclusions

## Procedure

1. Study the rock layers at Sites 1 and 2. Write down the similarities and differences between the layers at the two sites.
2. List the kinds of fossils that are found in each rock layer of Sites 1 and 2.



## Analyze and Conclude

Write your answers on the lines provided. Use a separate sheet of paper if you need more room.

### Site 1

1. **Interpreting Data** What "fossils clues" in layers A and B indicate the kind of environment that existed when these rock layers were formed? How did the environment change in layer D?

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2. **Drawing Conclusions** Which layer is the oldest? How do you know?

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3. **Drawing Conclusions** Which of the layers formed most recently? How do you know?

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4. **Inferring** Why are there no fossils in layers C and E?

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5. **Observing** What kind of fossils occurred in layer F?

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**Site 2**

6. **Inferring** Which layer at Site 1 might have formed at the same time as layer W at Site 2?

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7. **Relating Cause and Effect** What clues show an unconformity or gap in the horizontal rock layers? Which rock layers are missing? What might have happened to these rock layers?

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8. **Interpreting Data** Which is older, intrusion V or layer Y? How do you know?

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9. **Communicating** Write a journal entry describing how the environment at Site 2 changed over time. Starting with the earliest layer, describe the types of organisms, their environment, and how the environment changed.

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**More to Explore**

Draw a sketch similar to Site 2, and include a fault that cuts across the intrusion. Have a partner then identify the relative ages of the fault, the intrusion, and the layers cut by the fault.