

Name: \_\_\_\_\_

# Skill Sheet 28-A

# Relative Dating

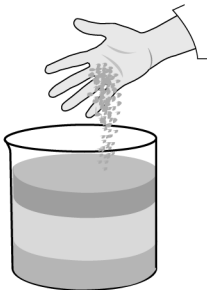


Relative dating is a method used to determine the general age of a rock, rock formation, or fossil. When you use relative dating, you are not trying to determine the exact age of something. Instead, you use clues to sequence events that occurred first, then second, and so on. A number of concepts are used to identify the clues that indicate the order of events that made a rock formation.

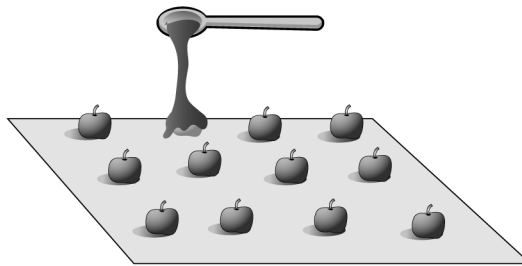
## 1. Relative dating concepts

The following situations illustrate relative dating concepts. Match each situation to the terms listed below the graphic. Write the letter of each situation in the blank next to each term.

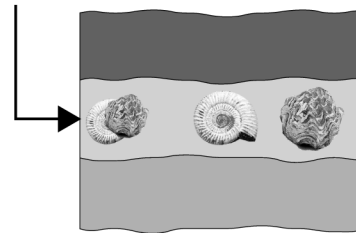
**A** Filling a jar with layers of colored sand



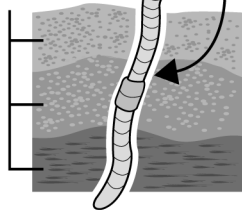
**B** Making chocolate covered cherries



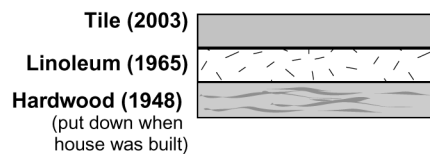
**C** Layer of limestone with fossils  
Fossils are the same age as limestone layer



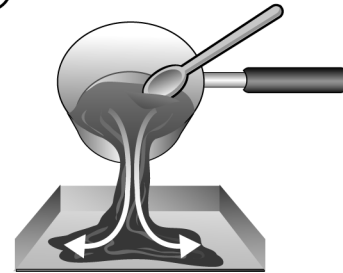
**D** Layers of soil  
Earthworm



**E** Cross-section of an old floor



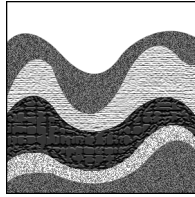
**F** Making a batch of brownies



1. Superposition \_\_\_\_\_
2. Original horizontality \_\_\_\_\_
3. Lateral continuity \_\_\_\_\_
4. Cross-cutting relationships \_\_\_\_\_
5. Inclusions \_\_\_\_\_
6. Faunal succession \_\_\_\_\_

## 2. Determining the order of events in a geologic cross-section

- Use arrows to indicate the direction in which the following rock layers were compressed to make a metamorphic rock.



- For the graphic at right, indicate the order in which the rock layers formed. Some layers formed at the same time. What relative dating concepts did you use to determine the order of the rock layers?

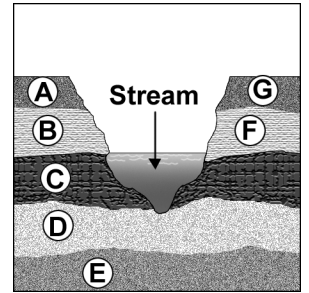
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- Look carefully at the graphic at right. Why is layer B smaller than layer A? Which direction did the fault shift? How do you know?

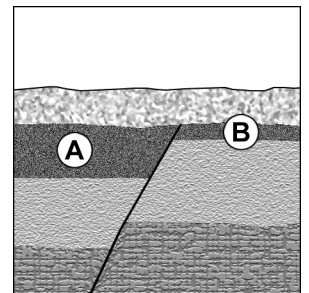
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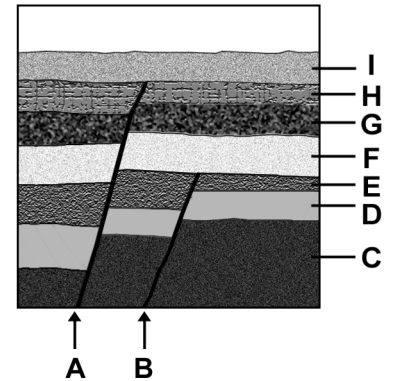


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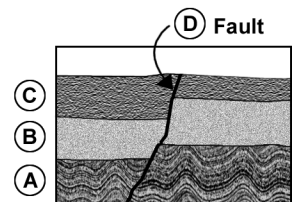
- Two faults are shown in this geologic cross-section at right. Place the rock layers and the two faults (A and B) in the order in which they happened.

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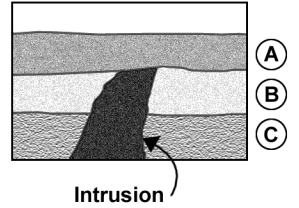


- This geologic cross section shows some rock layers that have undergone metamorphism. When did the metamorphic event happen relative to the other features in the graphic?

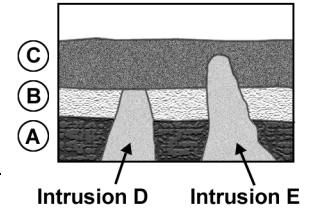
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6. Did the intrusion in this cross-section happen before or after layer A was formed? Justify your answer.

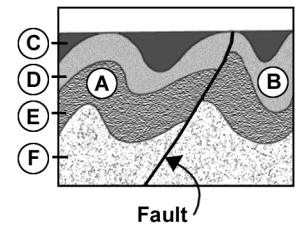


7. Look at the two intrusions in this picture. Explain the appearances of the top of each. Why is one top flattened while the top of the other intrusion is rounded? Place the rock layers and intrusions in the order in which they happened.



8. Examine this geologic cross-section.

a Why might the rock layers in this cross-section be wavy? Come up with an explanation.



b There are two fossils located at positions A and B. Which fossil is older? Justify your answer.