

Name: _____

Lab - Relative Age Dating of Geologic Features

Problem:

Can the relative ages of rocks be determined by studying the rock layers and structures?

Procedure:

1. Study Figures A and B.
2. Start by completing a legend. (What rocks are the symbols representing)
3. Next, determine the relative ages of the rock layers, unconformities, igneous dikes, and fault in each figure.
4. Answer the questions below about each figure.

Analysis Figure A:

1. Were any layers of the rock deposited after the igneous dike formed? Explain how you know. (You should mention what principles you used to come to that conclusion)

2. What type of unconformity is shown between letters D and F? What type of unconformity is shown between letters L and J? Explain.

3. What type of fault is shown? Explain.

4. Is it possible to determine whether the igneous dike formed before or after the fault occurred? Explain.

Name: _____

Analysis Figure B:

1. What type of fault is shown?
2. Is the igneous dike on the right (letter C) older or younger than the unconformity nearest the surface (between letters A and B)? Explain.
3. Are the two igneous dikes shown the same age? How do you know? (State the principle used to come to that conclusion)
4. Which two layers of rock may have been much thicker at one time than they are now?

Conclusion:

1. Identify the relative age of each rock layer, igneous dike, fault, and unconformity in Figure A. (Hint: start with the youngest first and label it with a "1")
2. Repeat the above procedure for Figure B.
3. In Figure A, answer the following question. Which is older? (Circle the correct answer)

A or E	G or A
G or J	I or B
A or I	E or B
E or J	J or H

4. In figure B, answer the following question. Which is older? (Circle the correct answer)

A or C	G or H
E or J	B or E
D or G	C or I
I or J	H or B

Name: _____

