

You have previously studied how various types of rocks form. Igneous, sedimentary and metamorphic rocks all form under different conditions and can give clues to the environment at the time they formed. As rock layers and rock types show change, they can show environmental change.

In a series of layers of rock, the oldest rocks are usually on the bottom of the series. Why is this? Can you think of any occurrences that might have older rocks on top of younger rocks?

In this investigation, you will examine some cross-sections of rock outcrops and try to explain the series of events that made the outcrop appear as it does today. Keep in mind what you have learned about the formation of the different types of rocks, the effects of erosion at the earth's surface, how igneous intrusions and extrusions occur, and what you know about changes in the earth's crust.

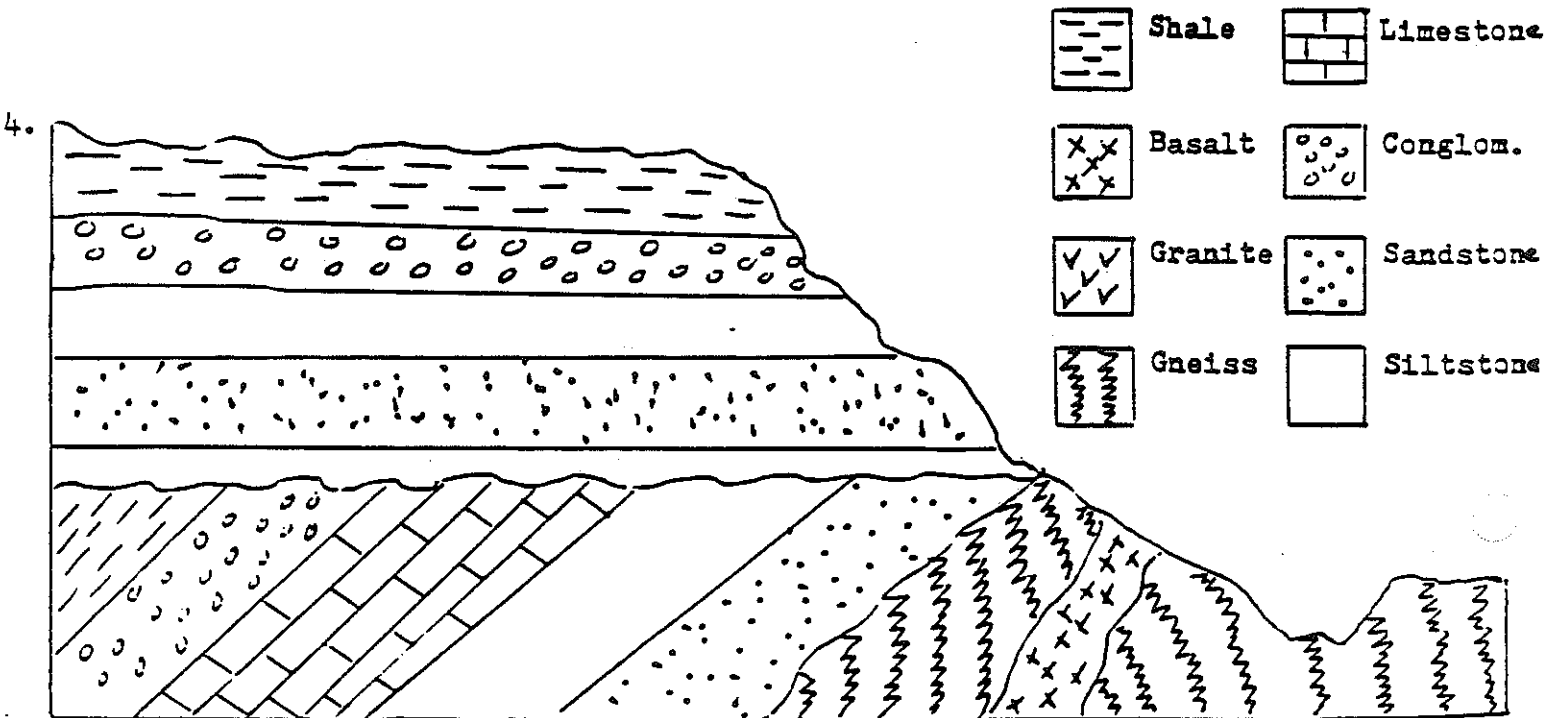
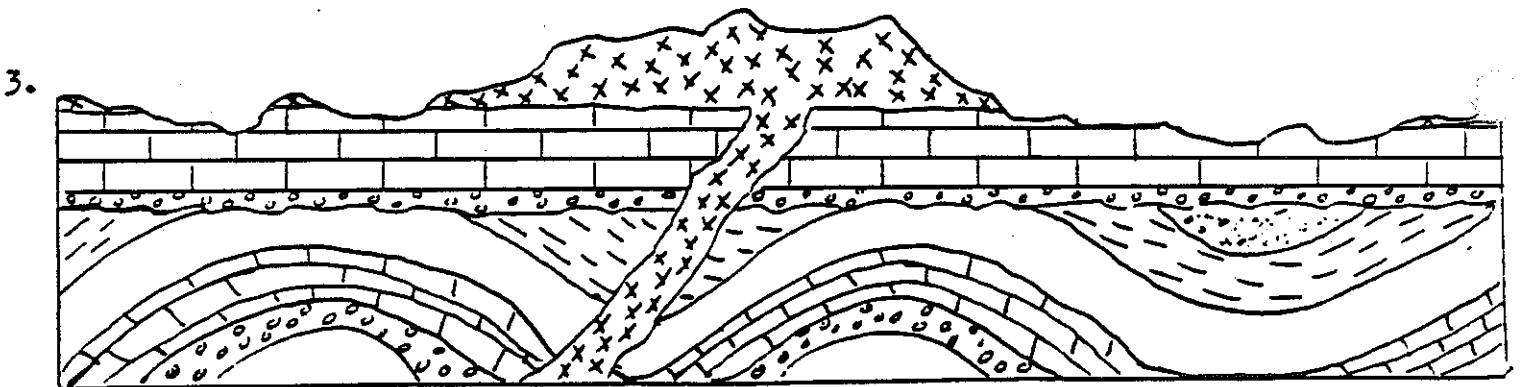
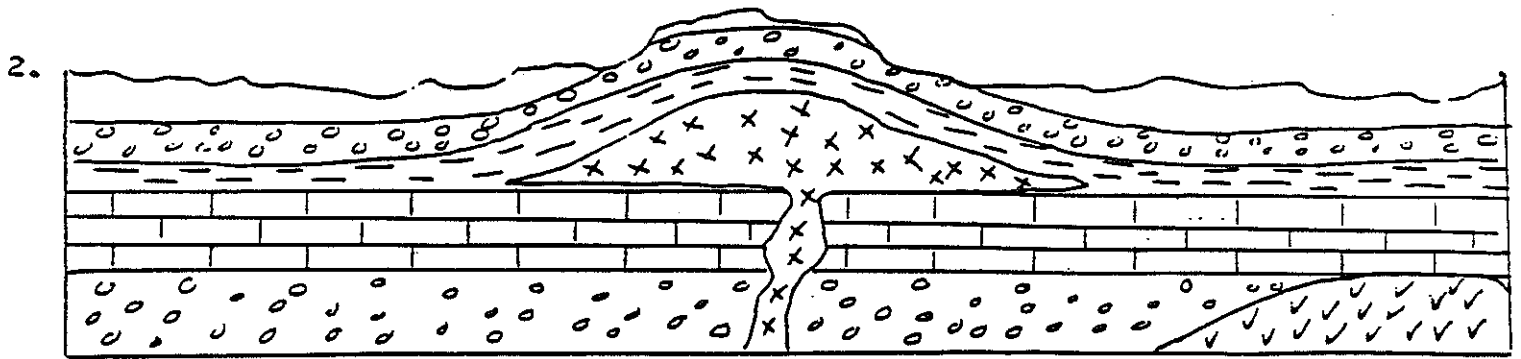
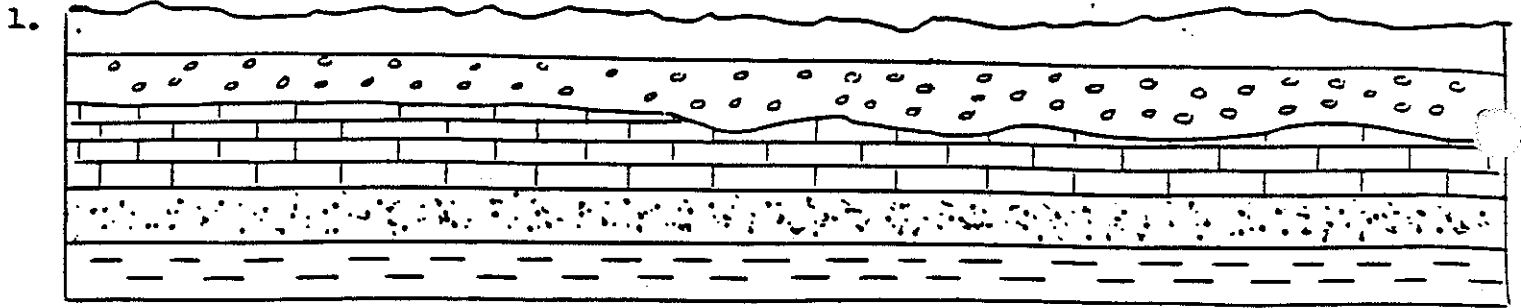
Problem: How can we determine the sequence of geologic events in an area?

Objectives: After completing this investigation, you should be able to:

1. Determine a possible sequence of geologic events in an area from studying the cross-section of a rock outcrop
2. Determine the relative age of rock layers in such a cross-section

PROCEDURE

1. Examine each of the cross-sections. On the Report Sheet, describe the sequence of events that occurred in each cross-section to make it appear as it does. Begin with the oldest event and end with the most recent.



REPORT SHEET

OUTCROP 1

OUTCROP 2

OUTCROP 3

OUTCROP 4

