

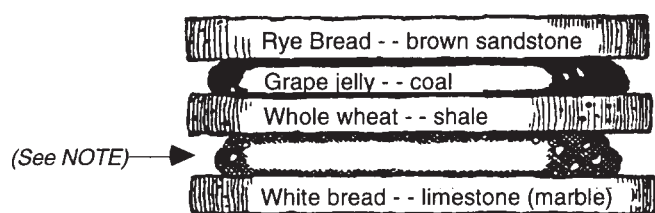
ACTIVITY - SEDIMENTARY ROCKS

To give students a basic understanding of how sedimentary rocks are formed, make a sandwich to illustrate the makeup and structure of the earth beneath our feet.

Procedure

Make a sandwich using white bread, peanut butter, rye bread, grape jelly, raisin bread, or whatever breads and ingredients the student likes.

As the students build their sandwich keep track of their progress by drawing a large diagram on the chalkboard. It should look something like this:



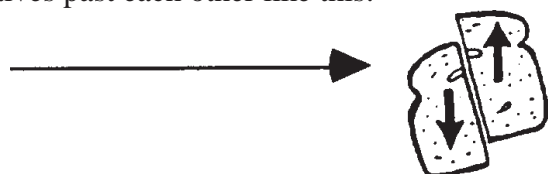
(Note: each item can represent whatever **resource** the student wants it to be. Examples: cheese = clay; mayonaise = oil/natural gas; chunky peanut butter = halite (salt).

Use imaginative rock names such as *rye bread sandstone* or *grape jelly coal*, etc. Use the sandwich to show how sedimentary rocks were deposited in layers. Tell the story of how sedimentary rocks were formed as the sandwich is built. When the sandwiches are ready, have a question and answer session on relating the age of the sandwich layers to the rock layers.

Sample questions:

1. Which is the oldest layer? Why?
2. Which is the youngest? Why?
3. Who can tell us the age of the middle layer?

Fault Illustration—Cut one sandwich in half and hold the two halves together in front of the class. Slide the two halves past each other like this:



You have just shown how **faulting** can occur.
NOW—everyone can enjoy their sandwiches!

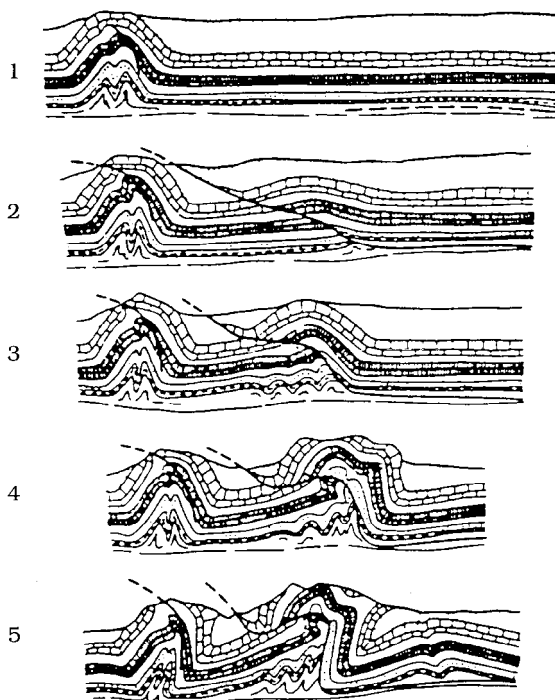
ACTIVITY - MOUNTAIN BUILDING Folding and Faulting

Have students color each layer of rock in the enlarged diagram. They will then see and follow each layer of rock from deposition of younger rock over older rock in orderly layers. By using the same colors chosen for each layer in diagram 1, the folding and faulting processes that happen when mountains are forming can be easily seen. These structural changes are caused by uplift movements of the Earth's crust and also can be a result of volcanic action and earthquakes.

The diagram below has been enlarged on the next page to make it easier for students to color... and for them to understand why veins 'disappear' and why some ore deposits can only be found by drilling. The same type of changes in the Earth's crust make finding oil and gas deposits equally difficult.

Note: Suggest that students use the blacker formation which doesn't need to be colored and designate it as **coal**. Yellow is good for **gold**, green can be used for **copper**. Also, note the faults that have taken place in diagram 2, and also how erosion progresses through the remaining diagrams. Make a *key* for colors and minerals selected by students.

Mountain building is a fun thing to explore!

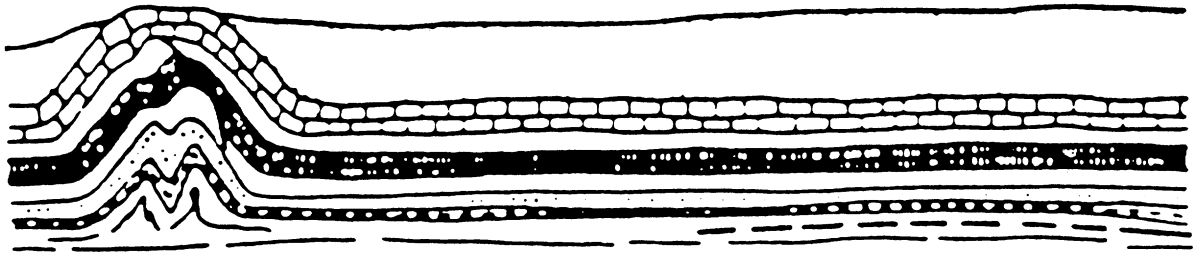


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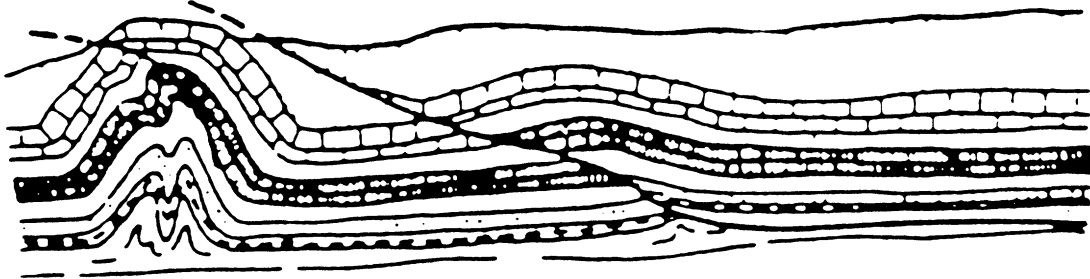
MOUNTAIN BUILDING

Fold and Fault Structures

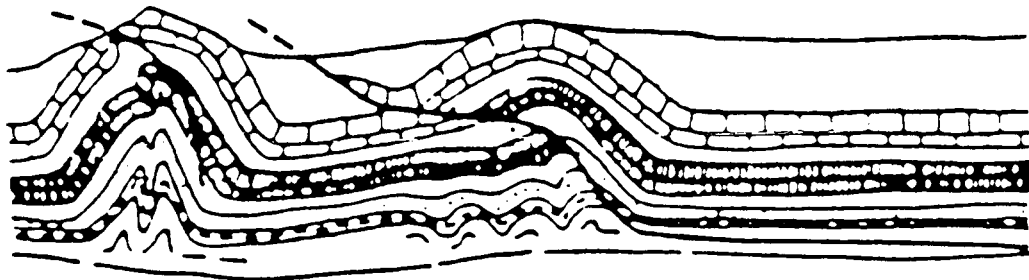
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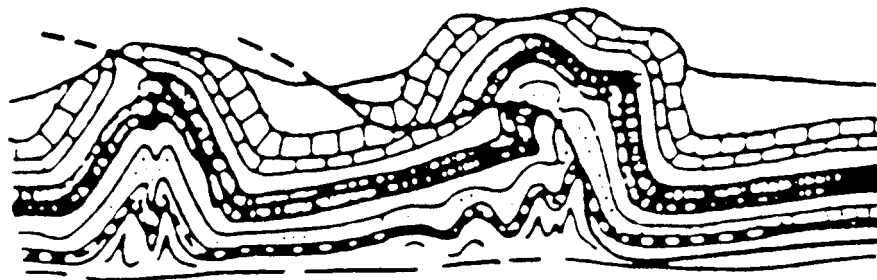
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