

Mountain Building

1. Place one stick of clay on a sheet of waxed paper. With your fingers, flatten the clay until it is about 1 cm thick. Repeat this process with the other two sticks of clay. Each slab should be about the same size. Place the three slabs of clay on top of one another. Then draw the side view of the stack of clay slabs.

What do the layers of clay represent?

What could have caused these different layers?

Which layer in your model would have formed first?

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2. Follow the directions in Steps a through e below. After each step, draw the side view or cross-section of the clay to show what happened. Then check the drawings in Part C to see which type of mountain your model most closely resembles. Label your drawing with the correct type of mountain and fault, if applicable. In the space beside each drawing on Part C, describe how that type of mountain is formed. Be careful! One type of fault does not form mountains!
- a. Place the palms of your hands on opposite edges of the slab and push in toward the center from both edges.
 - b. Reflatten the clay. Have a partner hold the clay slab several centimeters above the table. Place the wooden sphere beneath the clay slab and push upward with the sphere.
 - c. Reflatten the clay. Using the knife, make a single, angled cut from one side of the slab to the other through all the layers. Make sure the cut goes from the top right to the bottom left. What does this cut represent?

Push one section away from you and pull the other section toward you.
 - d. Put the clay sections back in place. Push up on the hanging wall (the section of clay that lies to the left of the cut).
 - e. Again, return the clay sections to their original position. Make a second cut several centimeters to the right of the first and angled in the opposite direction. Push upward on the piece of clay between the two cuts.

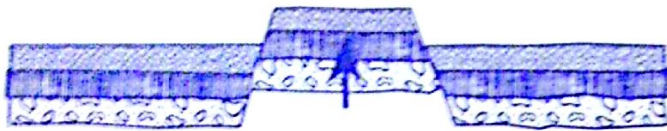
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a. lateral fault



b. fault mountain



c. fault-block mountain



d. dome mountain



e. folded mountain

What is the shape of each type of mountain?

Folded mountains: _____

Dome mountains: _____

Fault mountains: _____

Fault-block mountains: _____

In what ways is your model a good one? In what ways is it not a good one?
