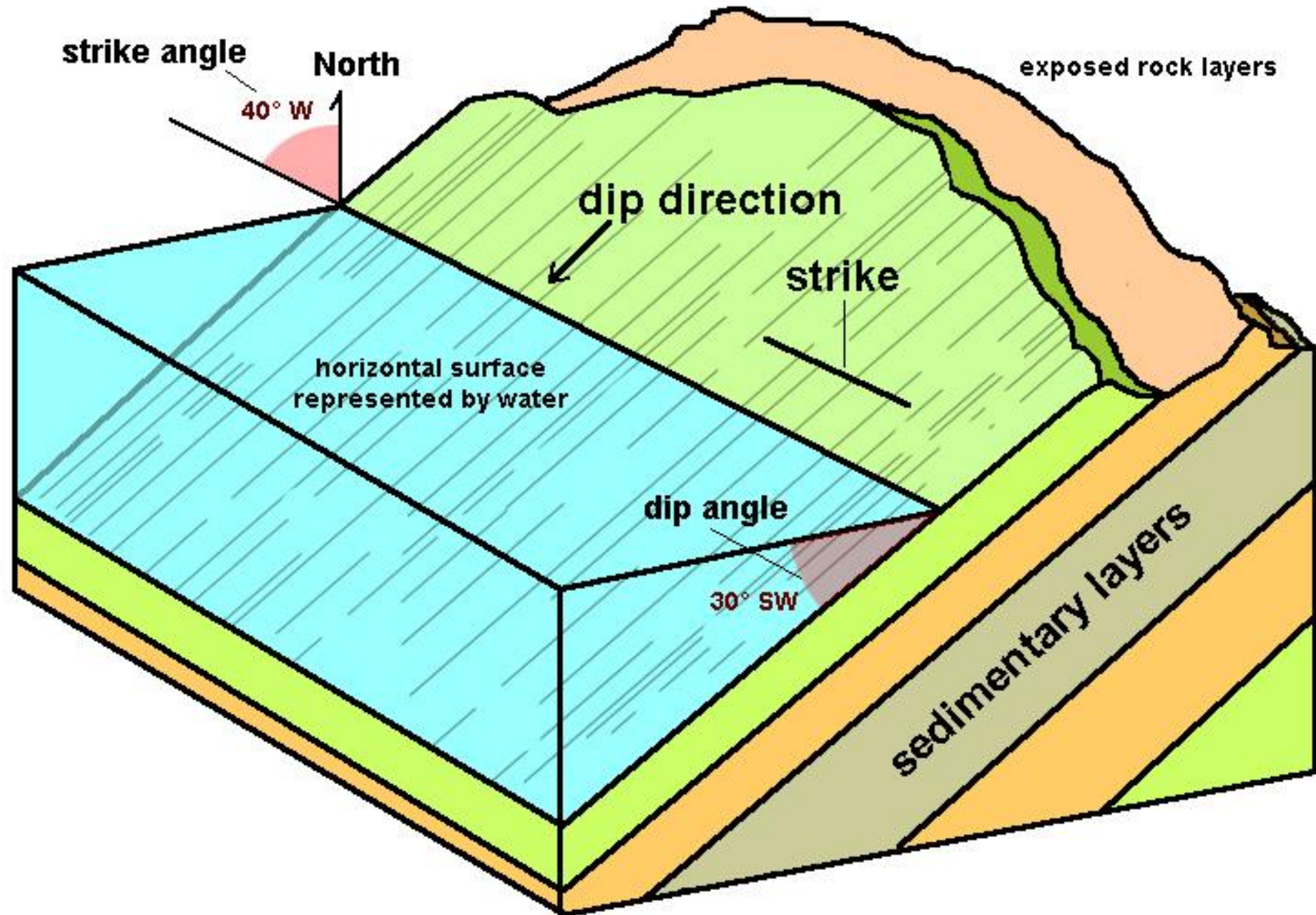
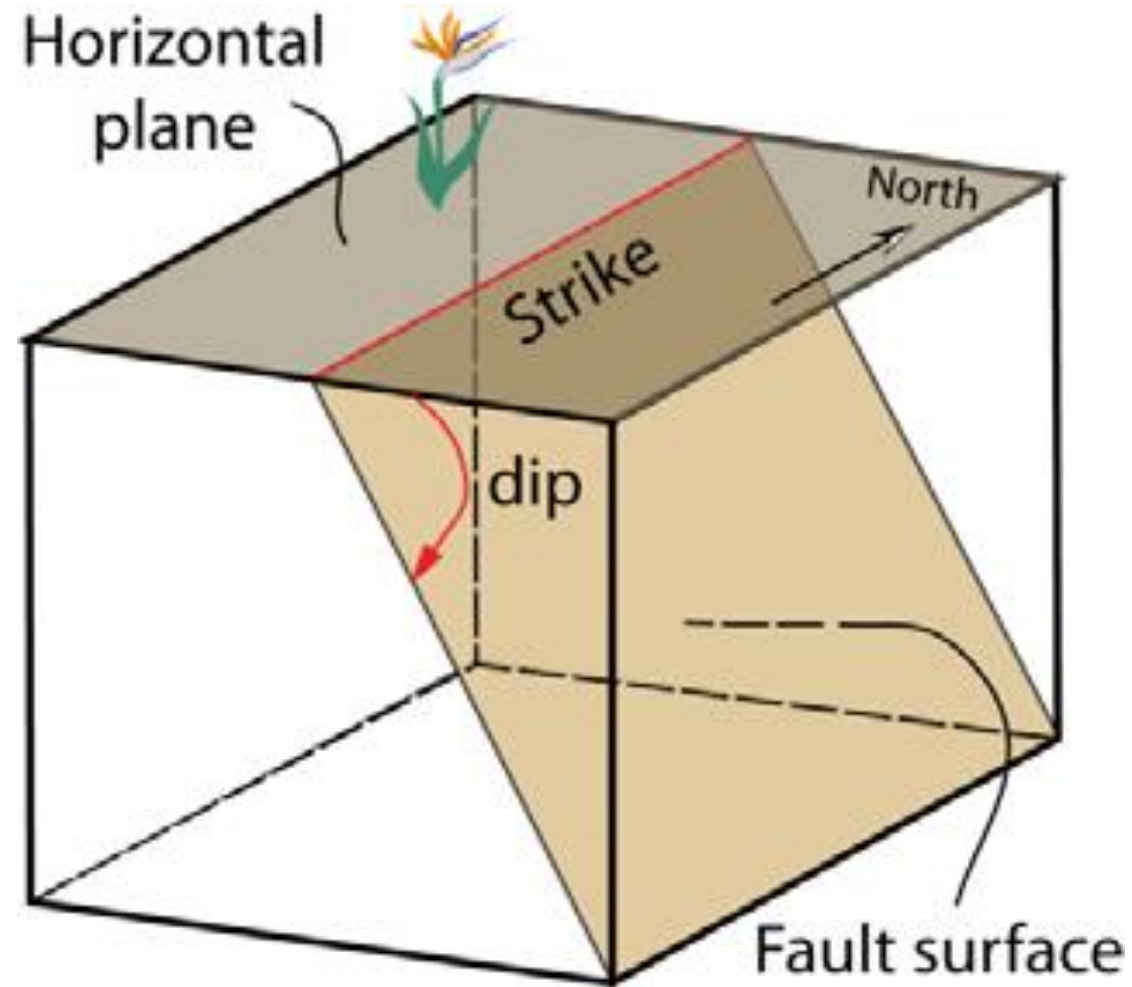


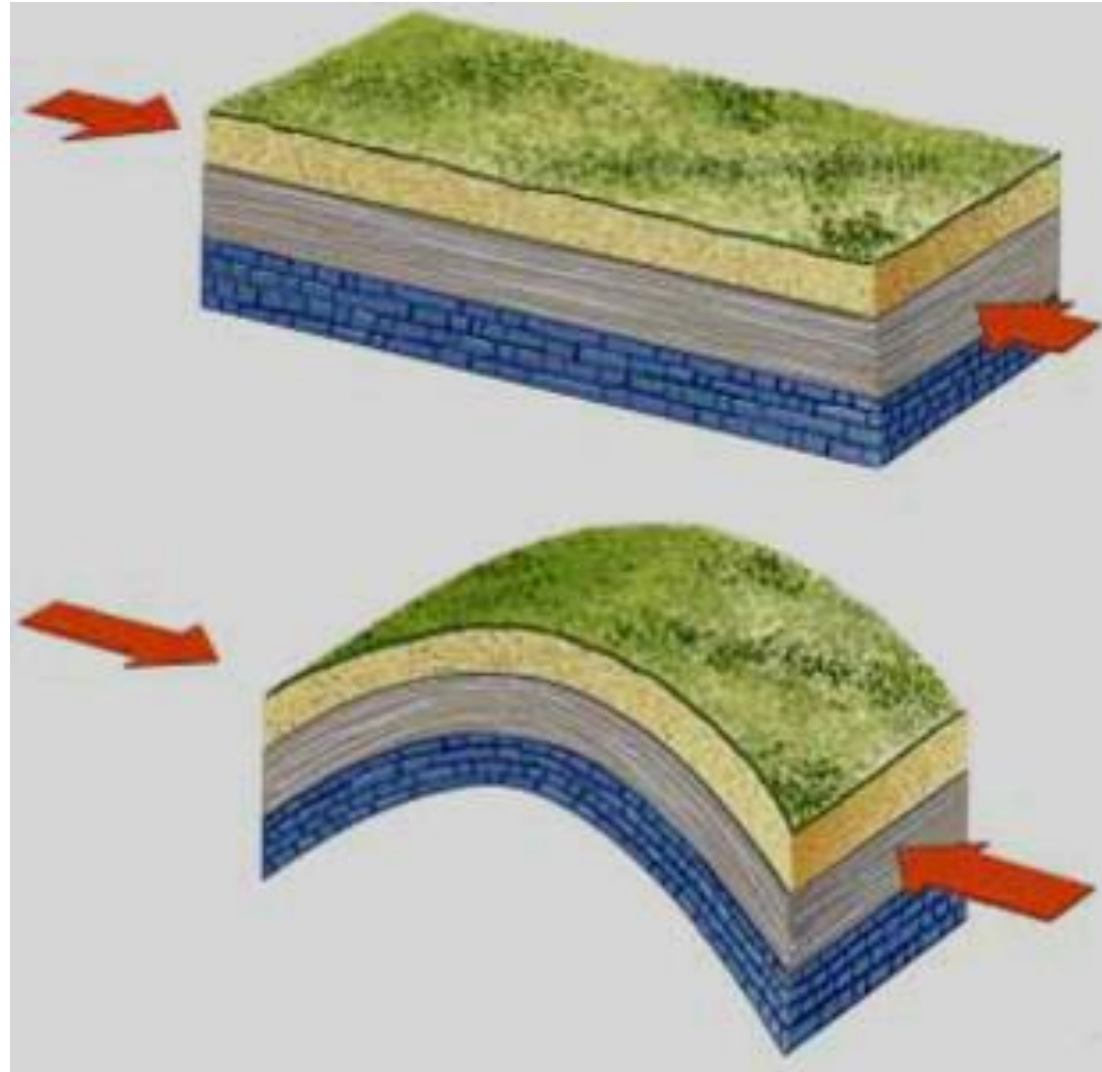
Block diagrams

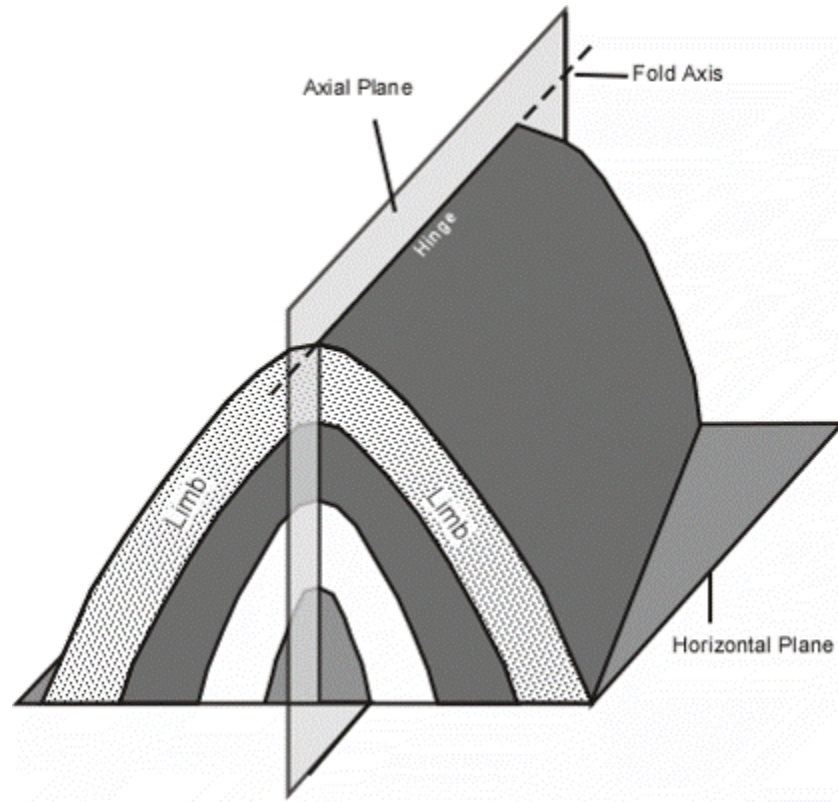
Describing orientation of geologic features with strike and dip

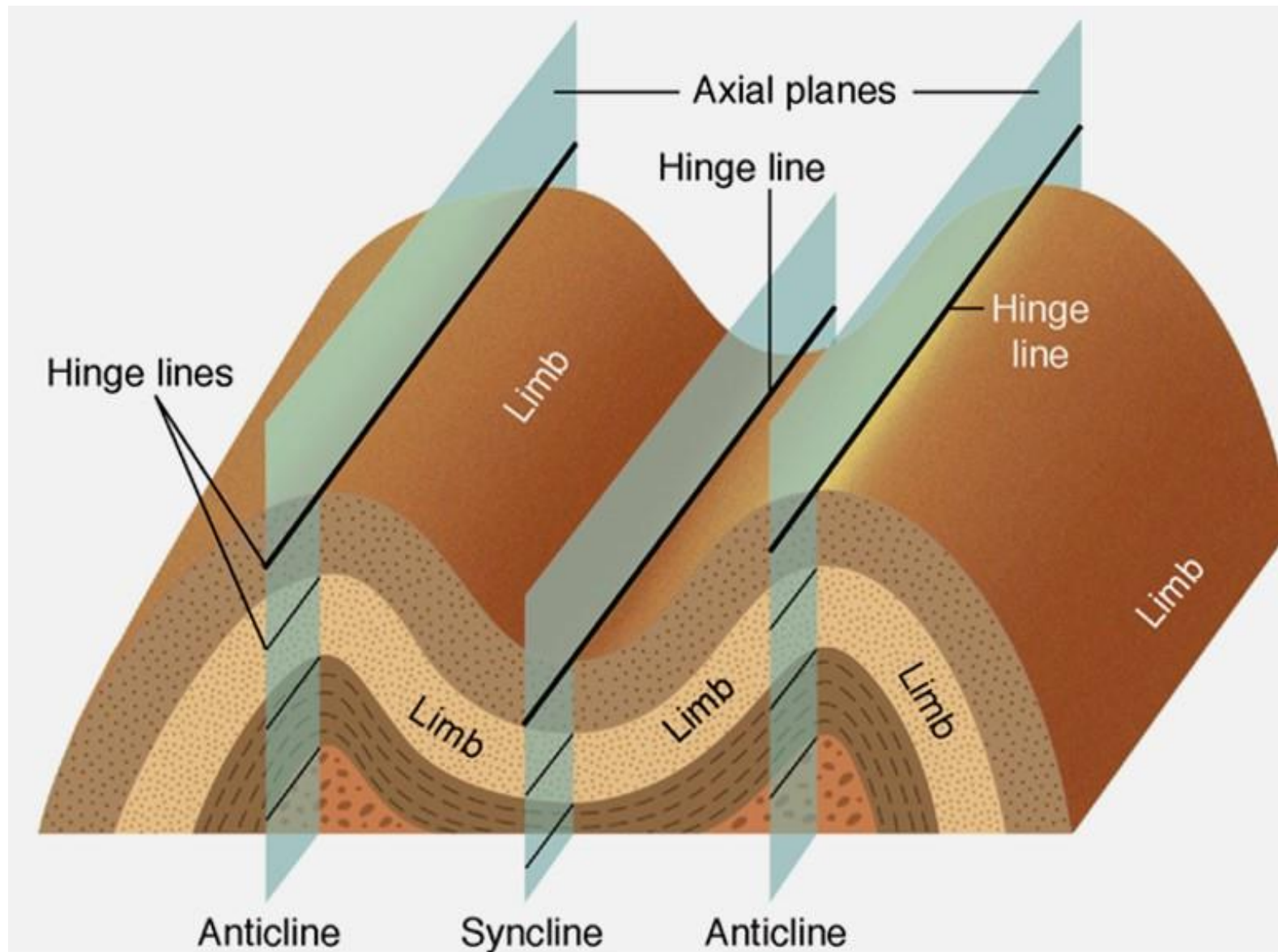


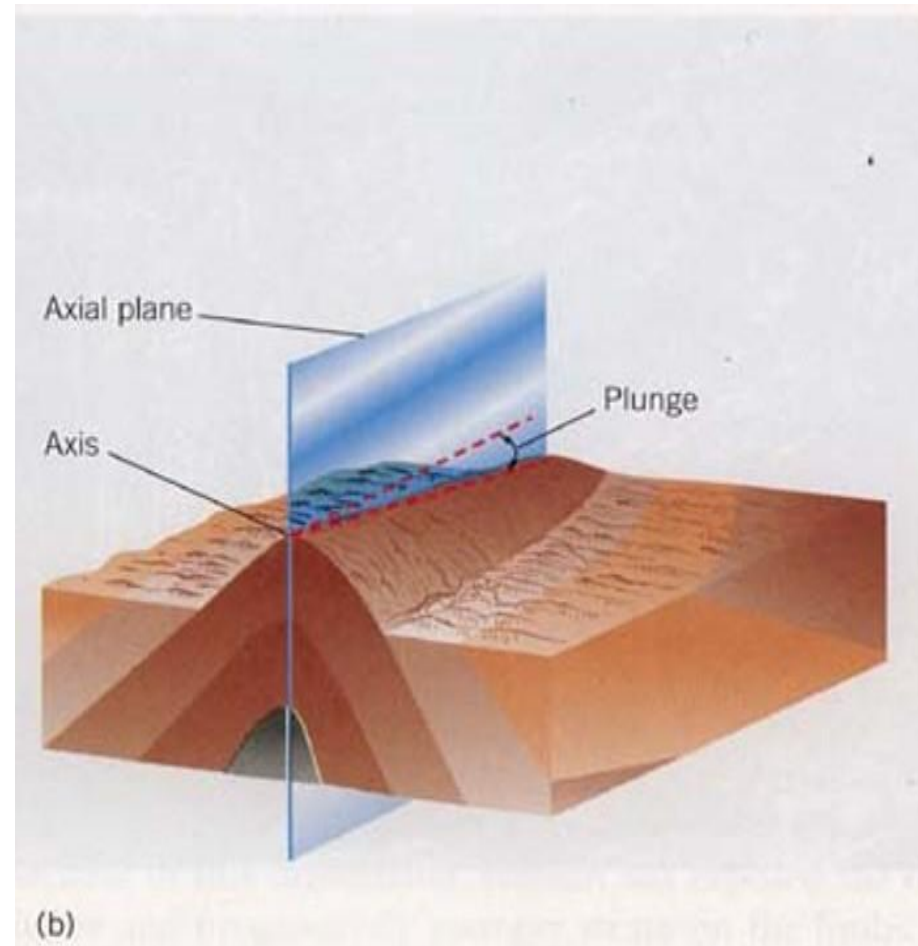


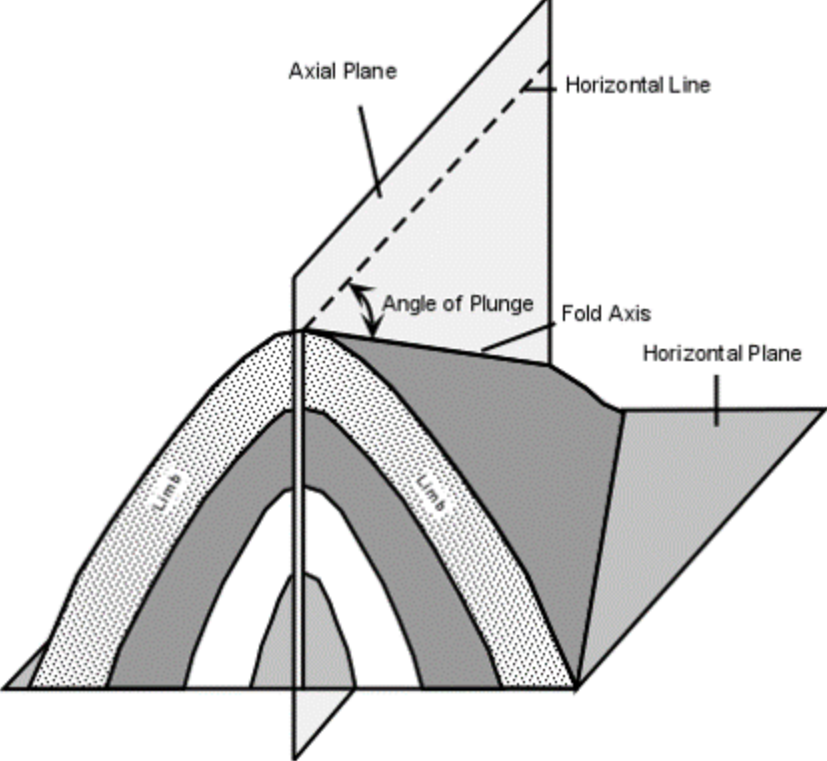
The attitude of a fault surface is its strike and dip. The direction of the line produced by the intersection of the fault surface with an imaginary horizontal plane is the strike while dip

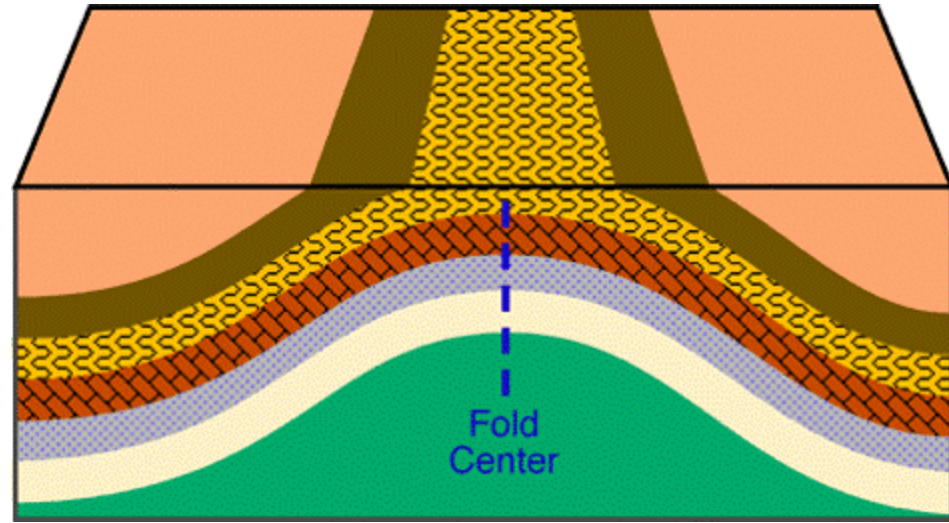




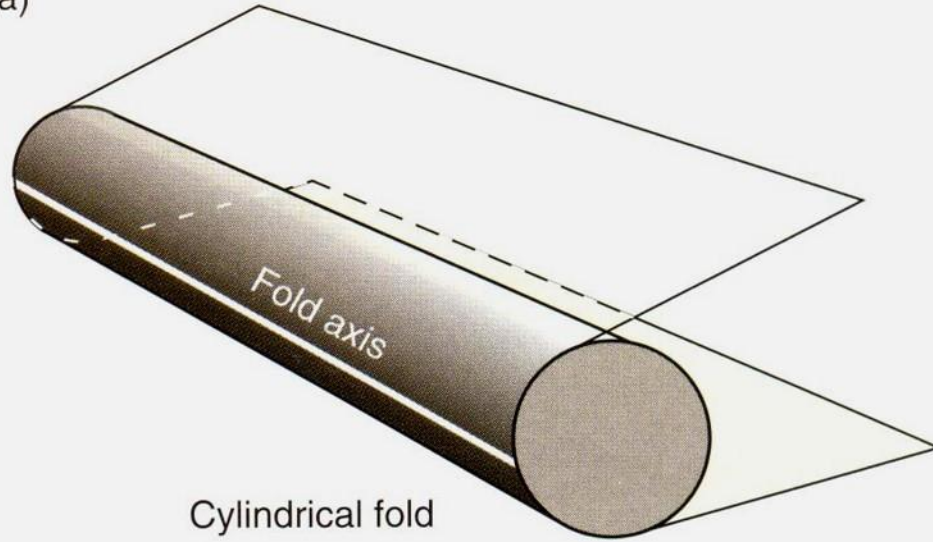






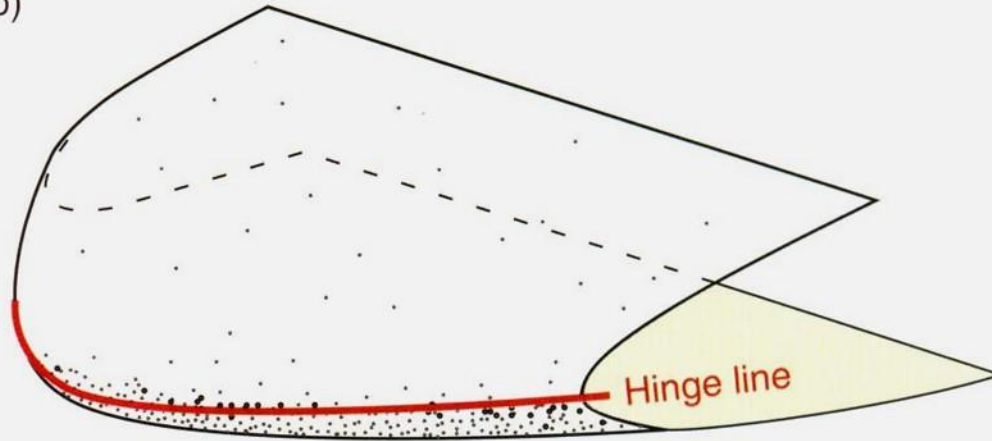


(a)

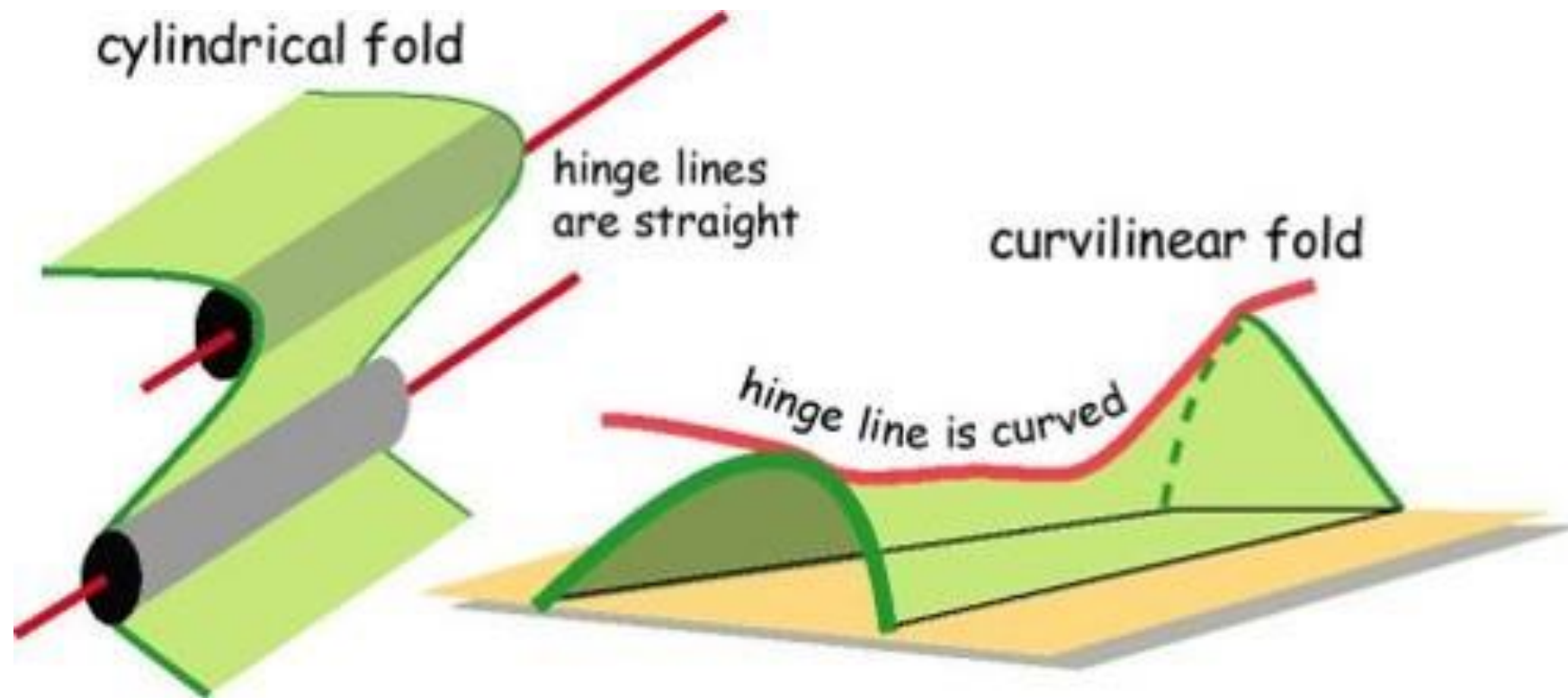


Cylindrical fold

(b)



Non-cylindrical fold



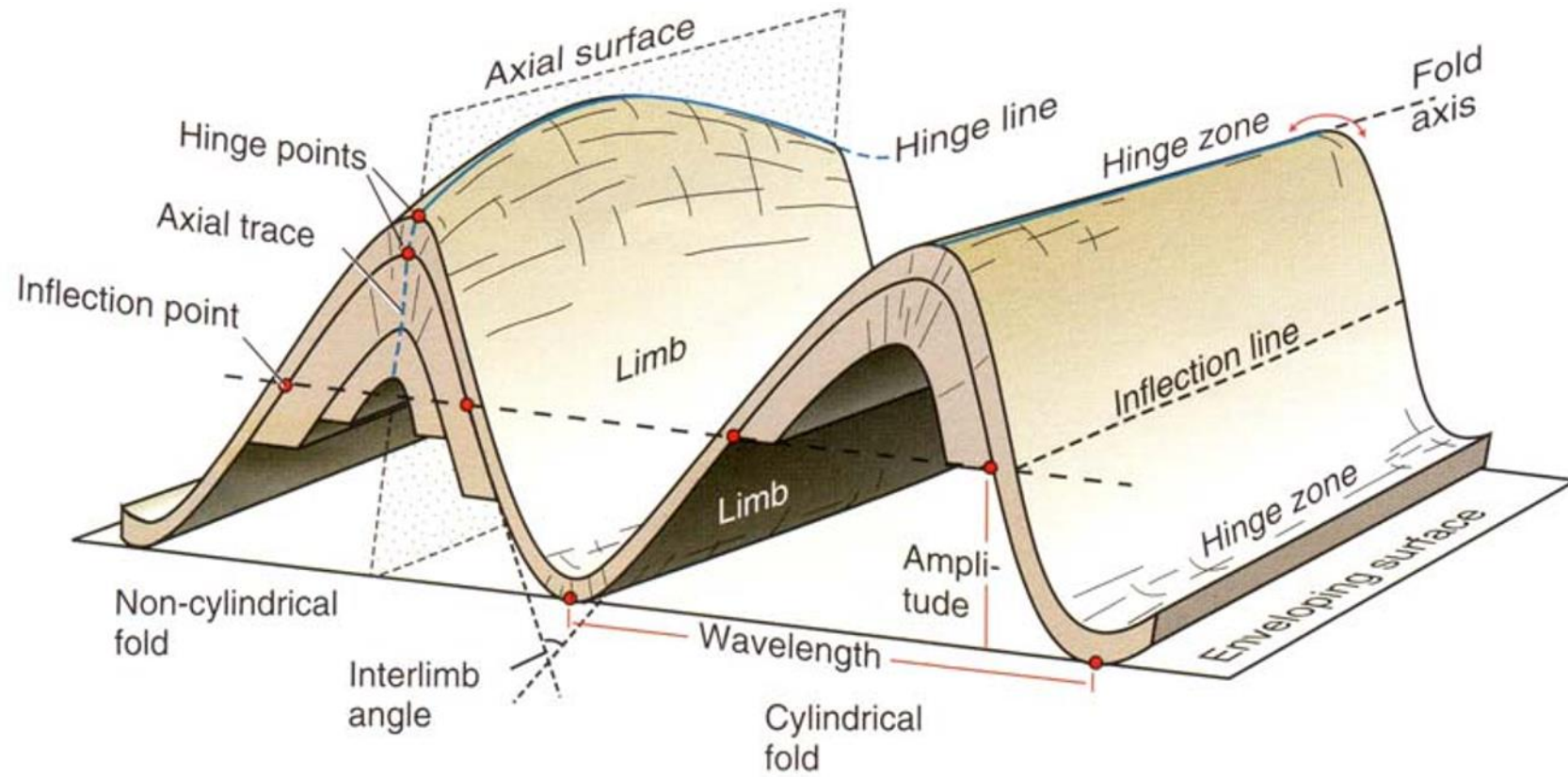
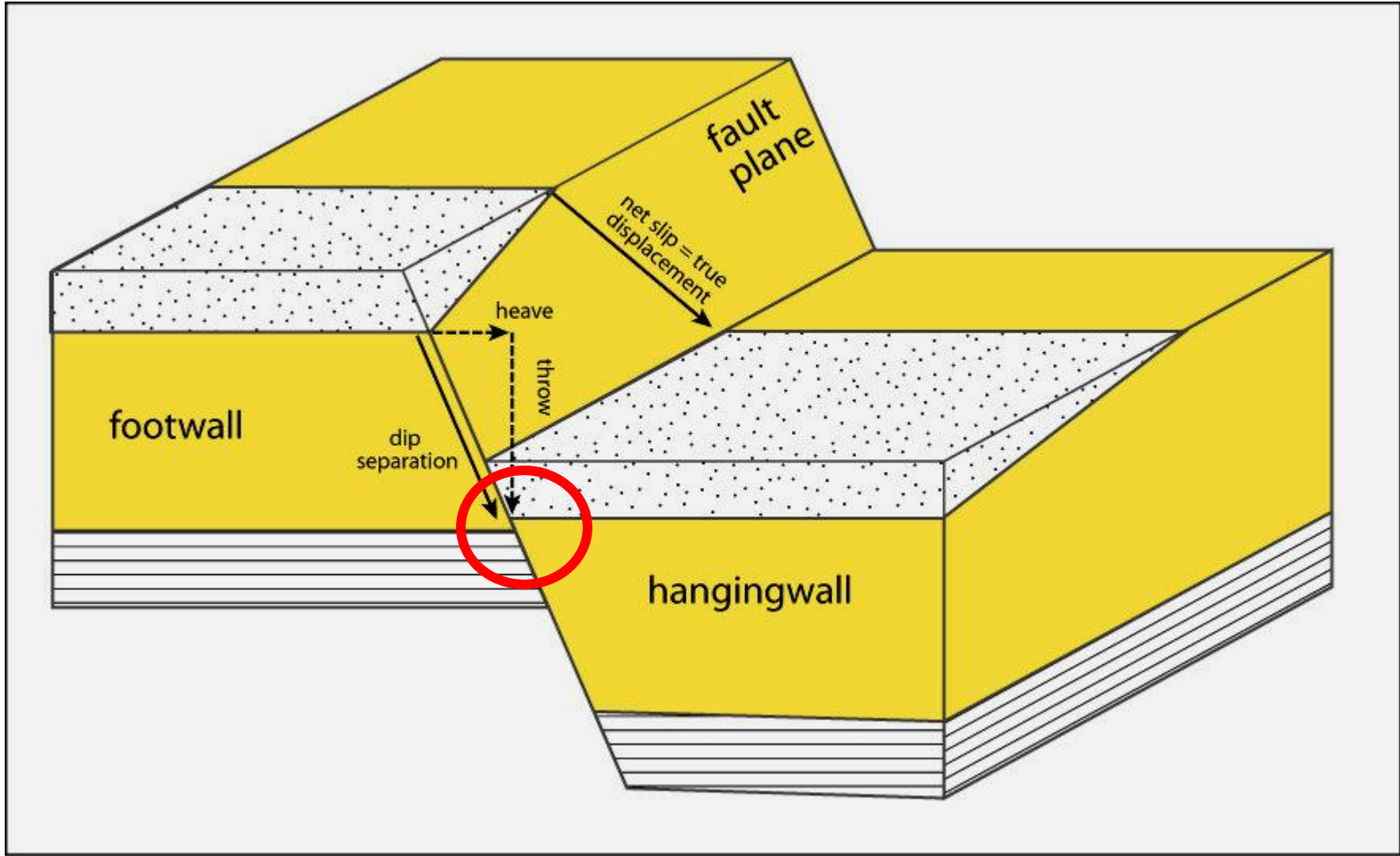
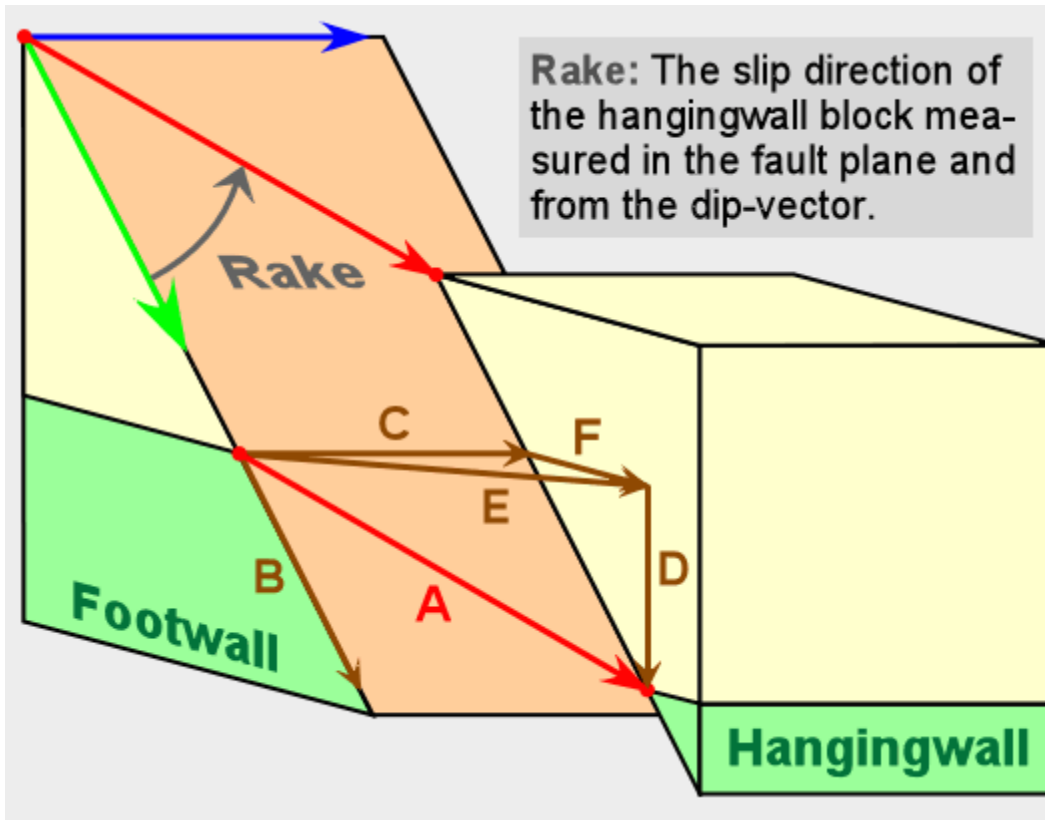


Figure 11.1 Geometric aspects of folds





Slip amount

A. Net-slip: The total slip on the fault.

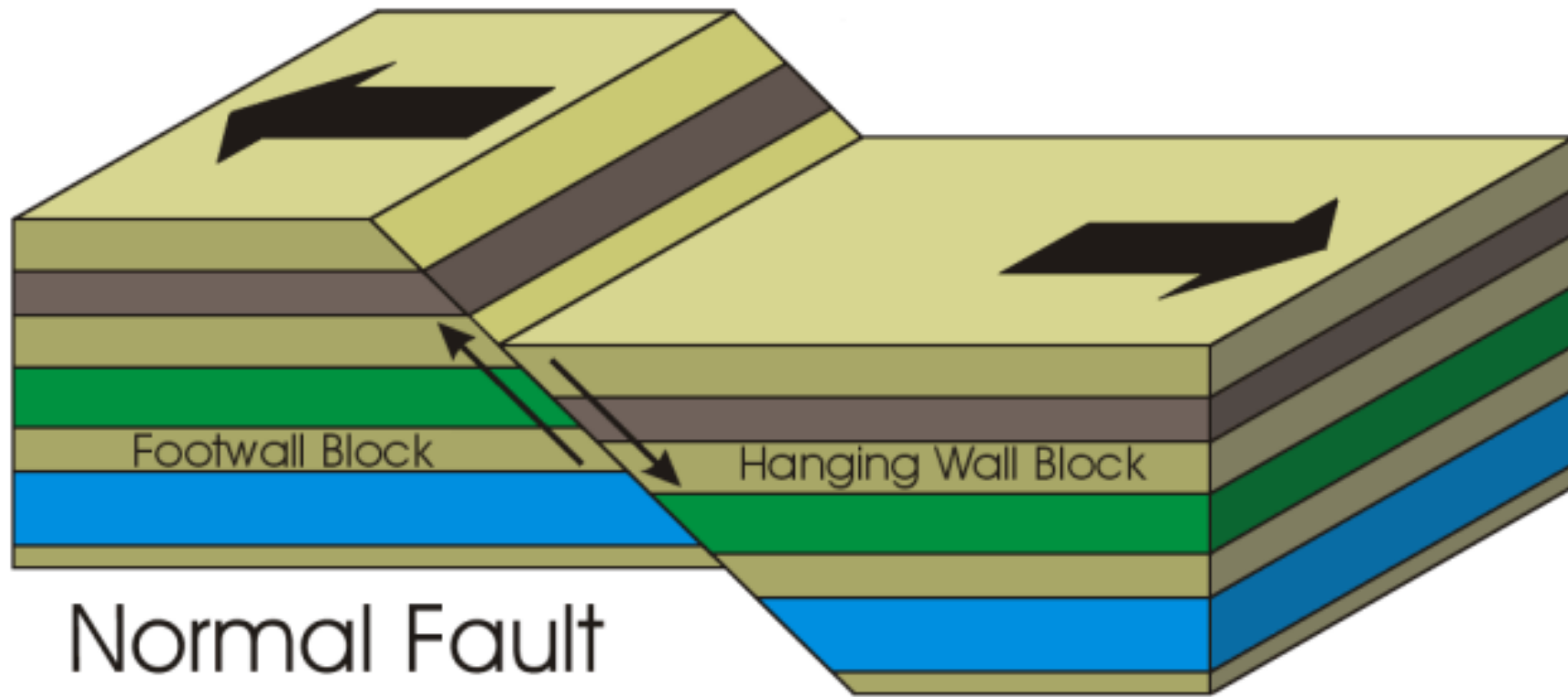
B. Dip-slip: The dip-parallel slip component.

C. Strike-slip: The strike-parallel slip component.

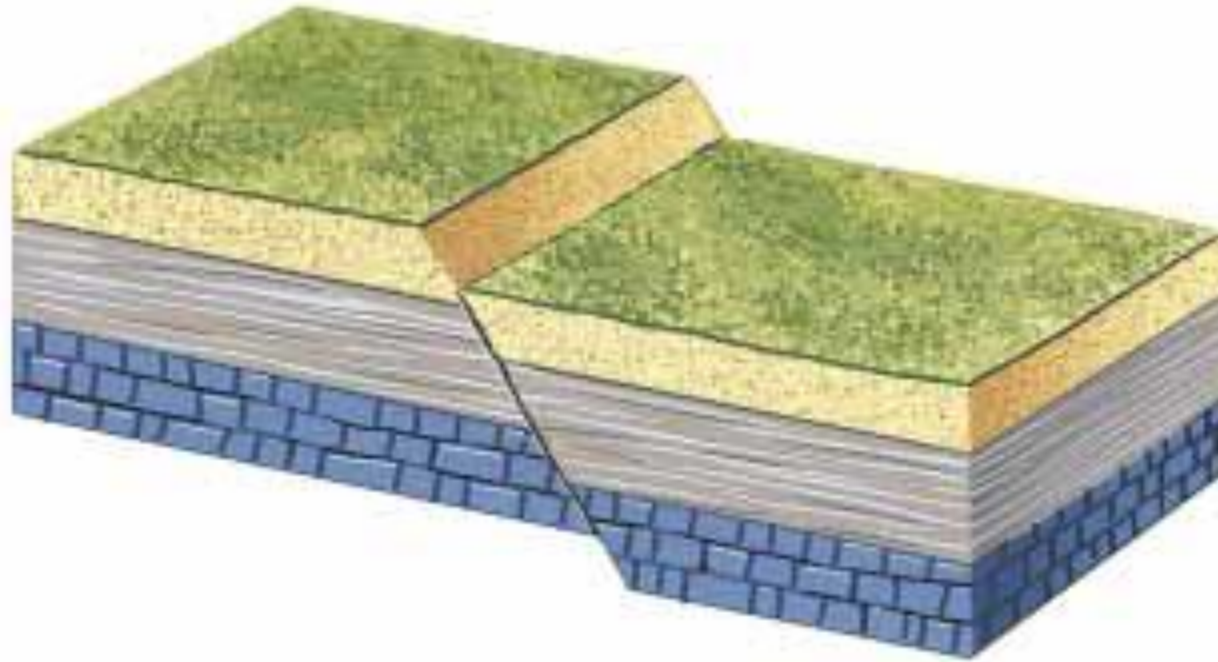
D. Vertical throw: The vertical component of the net-slip.

E. Horizontal throw: The total horizontal component of the net slip.

F. Heave, Stratigraphic heave: The apparent horizontal component of the net-slip.



Normal Fault



A

Figure 12–13 (a) Movement along a single fracture surface characterizes faults with relatively small slip.

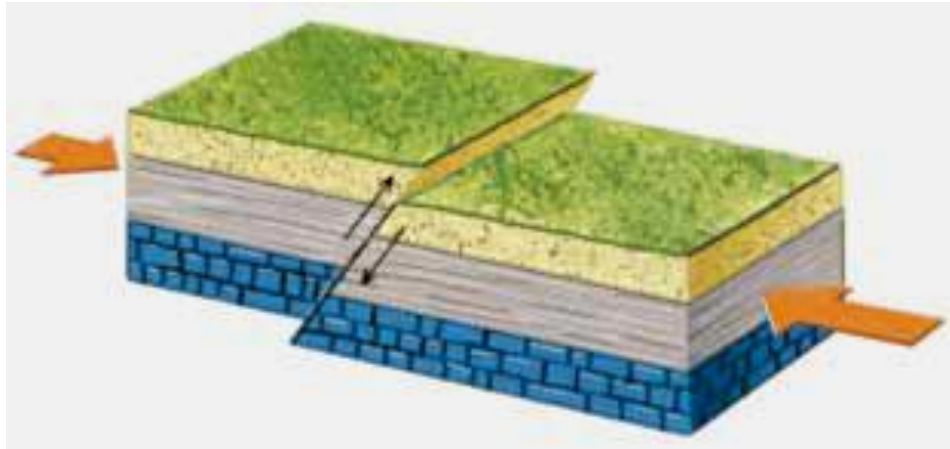


Figure 12–16 (a) A reverse fault accommodates crustal shortening and reflects squeezing of the crust, shown by large arrows. (b) A small reverse fault in Zion National Park, Utah.

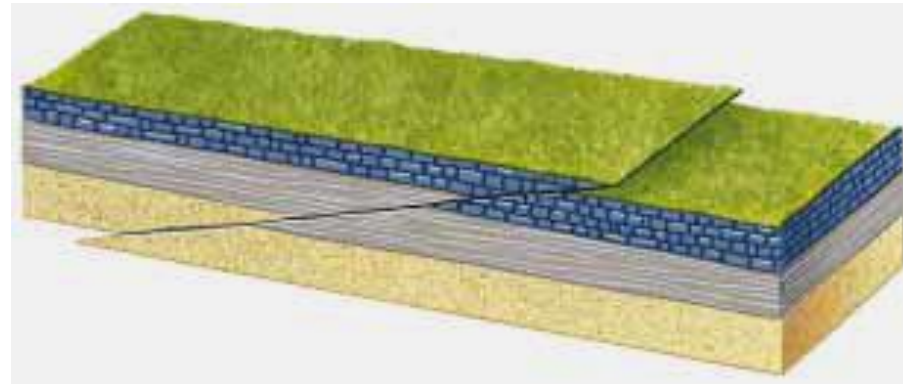
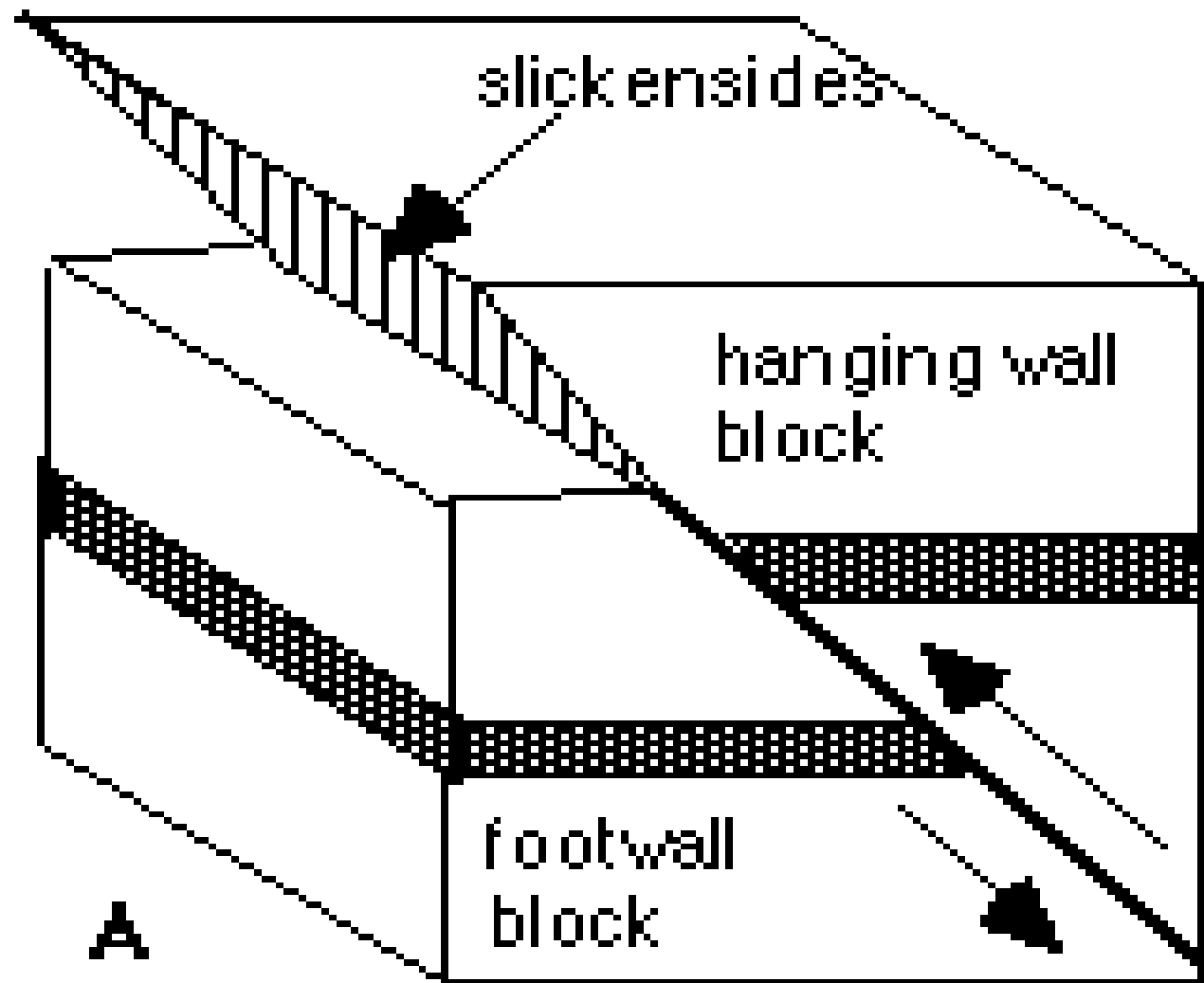
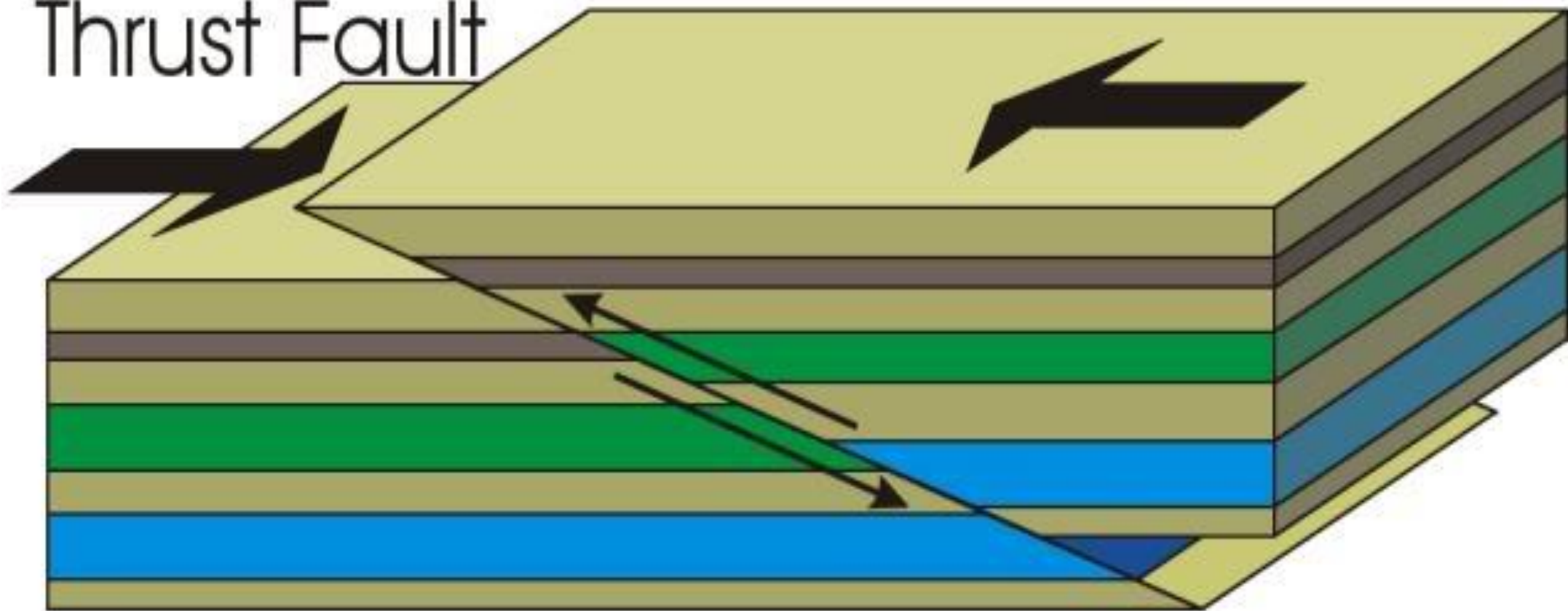


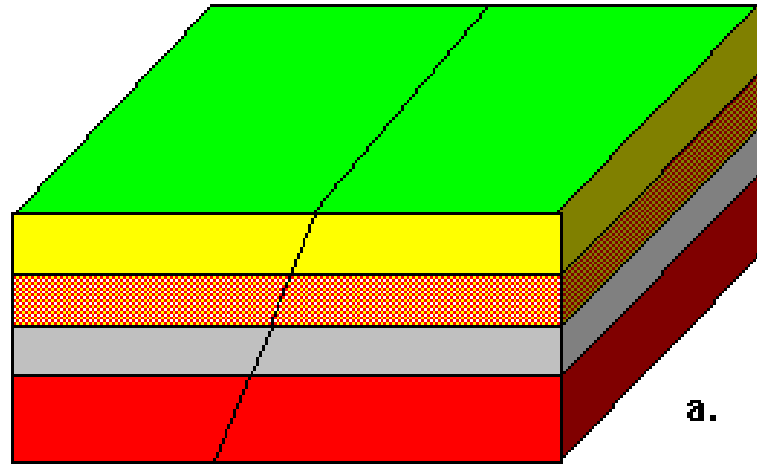
Figure 12–17 (a) A thrust fault is a low-angle reverse fault. (b) A small thrust fault near Flagstaff, Arizona. (Ward’s Natural Science Establishment, Inc.)



Reverse fault

Thrust Fault





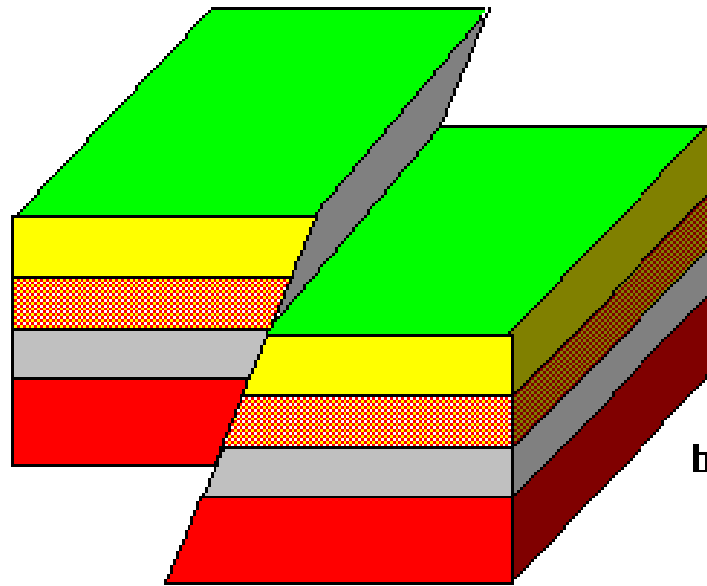
a.

Reverse or Thrust Faulting

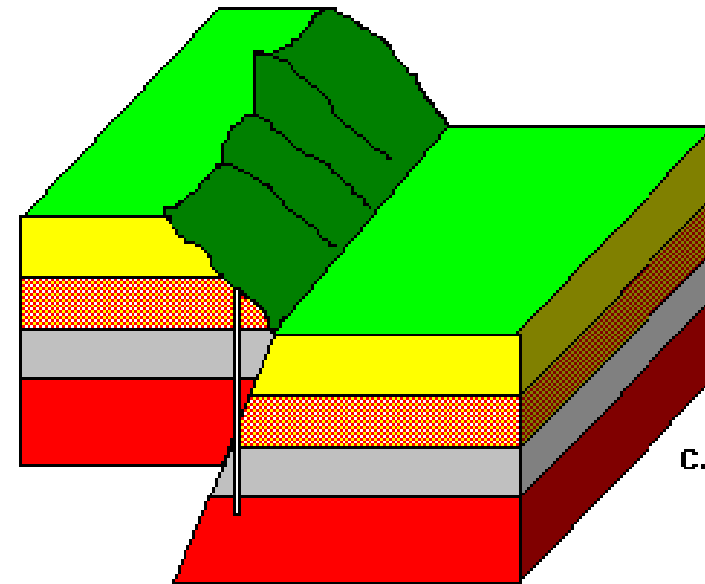
a. A block of crust before faulting.

b. After faulting. Note that the block becomes shorter.

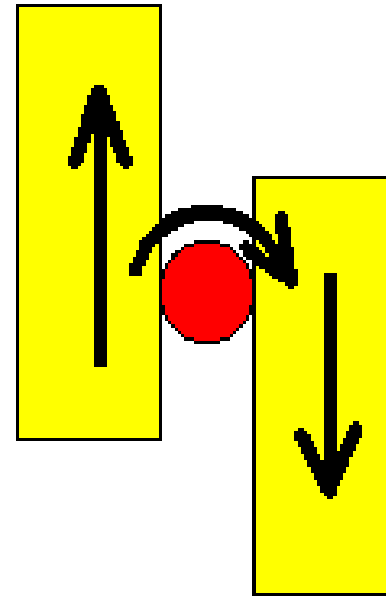
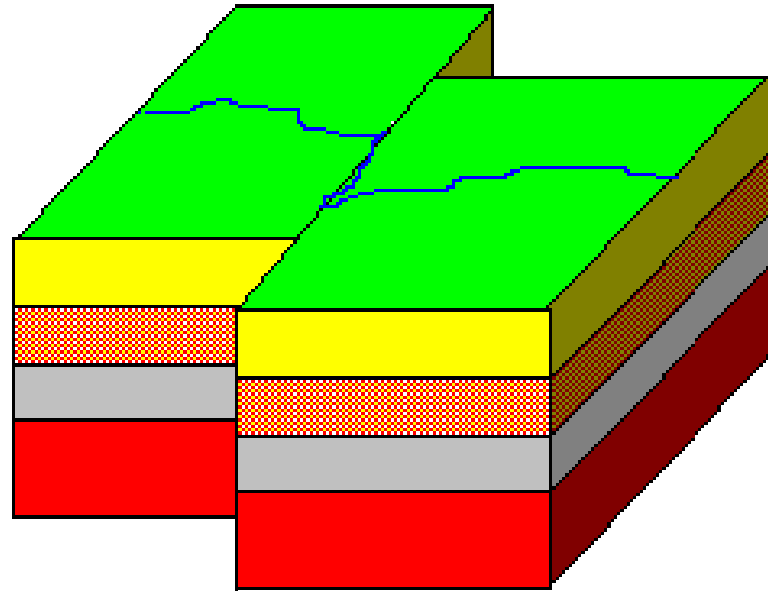
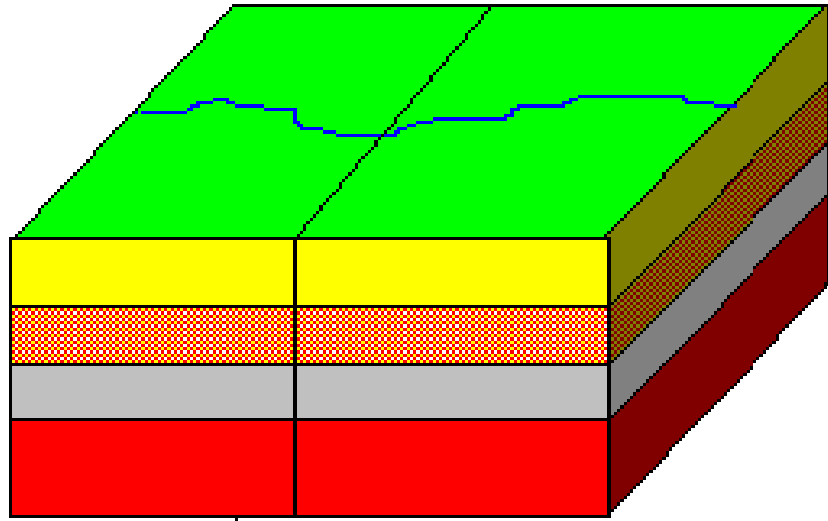
c. An eroded reverse fault. Note that the well passes through several layers twice.



b.



c.



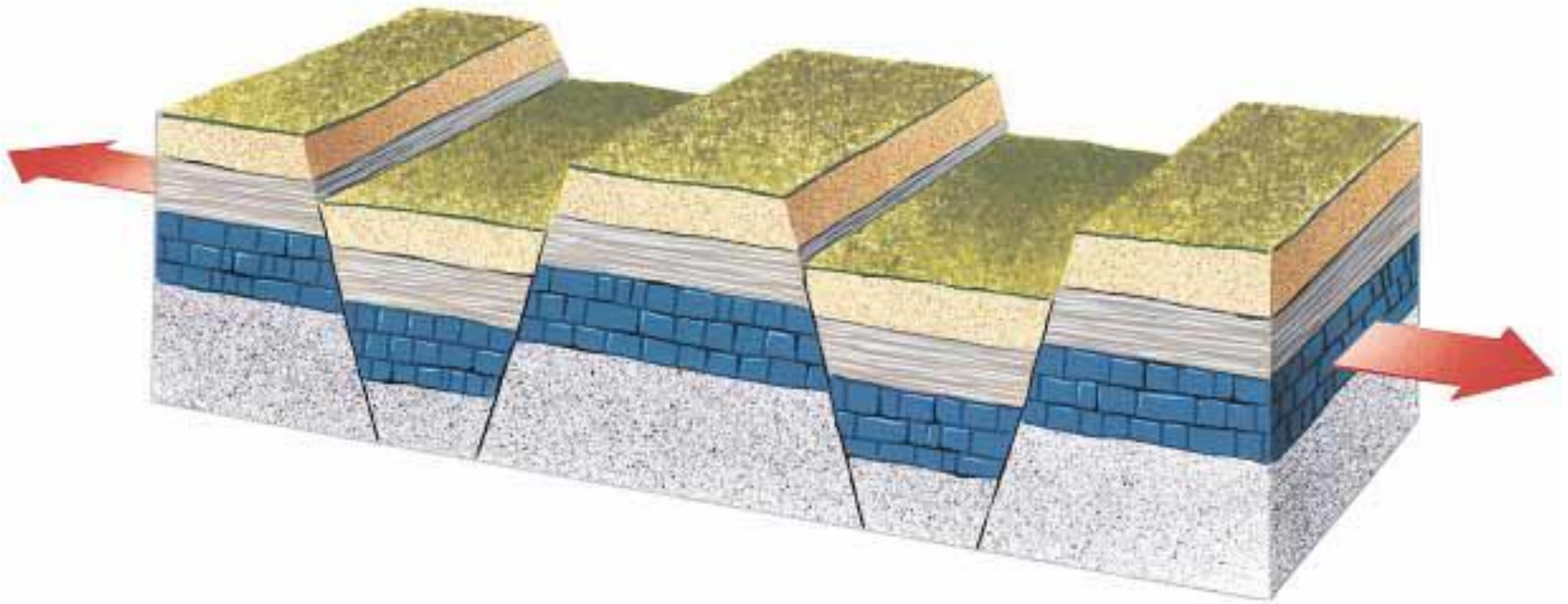


Figure 12–15 Horsts and grabens commonly form where tectonic forces stretch the Earth's crust.

