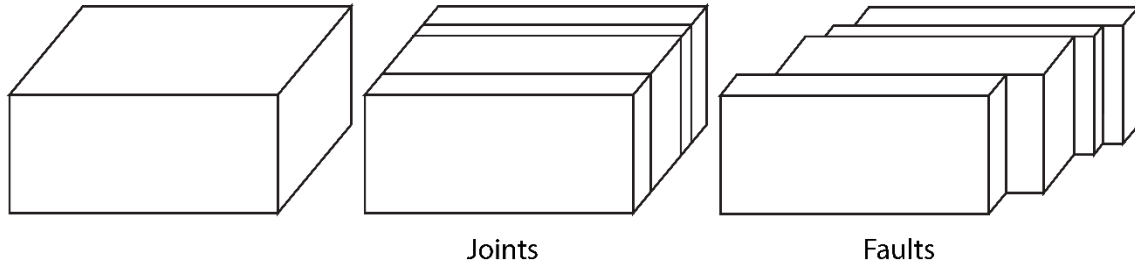


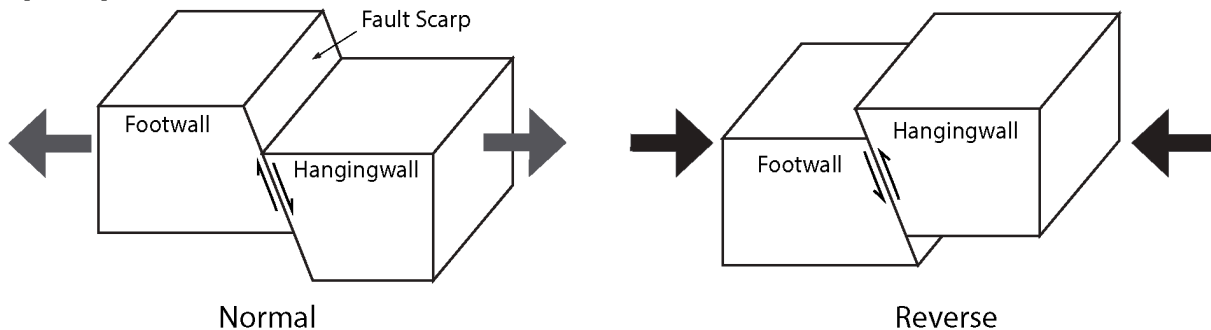
First some review of Faults:

Joint vs. Fault



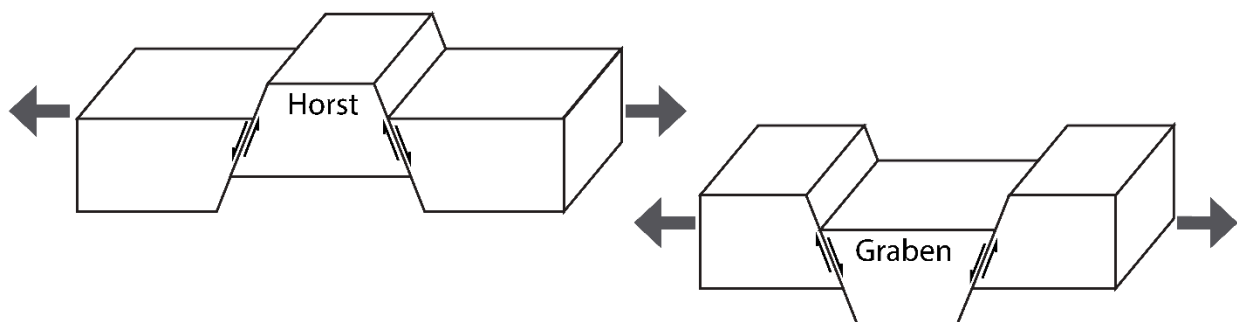
A *joint* is a brittle fracture of rock along which essentially no movement has occurred. A fracture along which significant movement has occurred is referred to as a *fault*.

Dip-slip faults



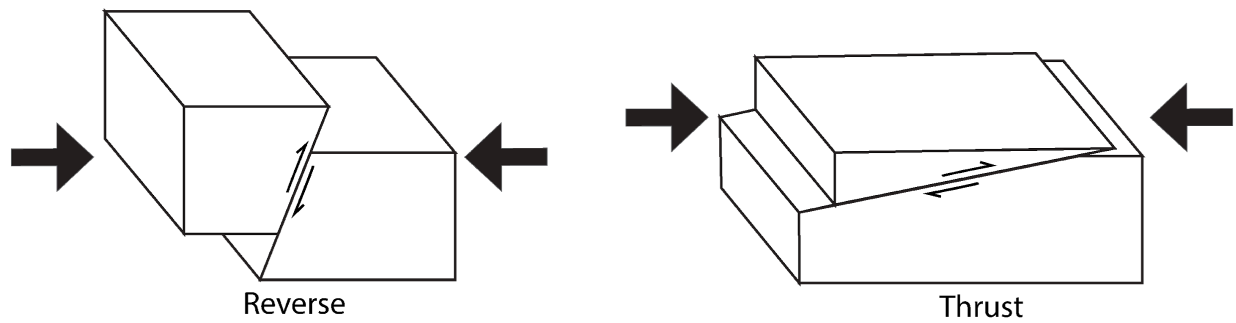
Movement along the fault plane that is vertical is known as a dip-slip fault. Along any non-vertical fault plane, the overhanging block, regardless of sense of movement, is known as the hangingwall block, while the underlying block is known as the footwall block.

Horst and Graben



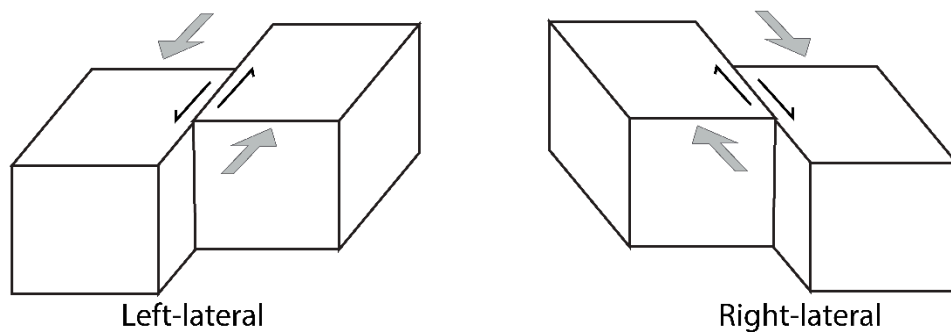
A block bounded by normal faults that has been uplifted relative to the surrounding blocks is known as a *horst block*. A *graben* is a block bounded by normal faults that has been dropped downward relative to the surrounding blocks.

Thrust faults



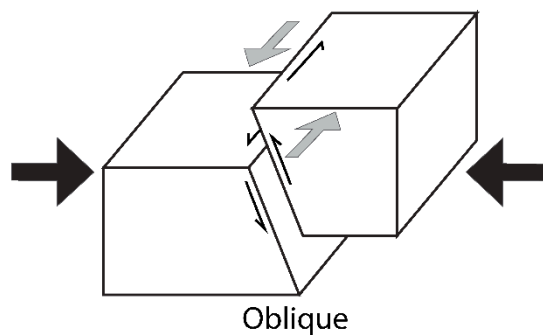
A low angle (less than 30°) reverse fault is referred to as a *thrust fault*.

Strike-slip



A *strike-slip* fault has dominantly horizontal movement. If you stand on one block, looking across the fault at the other block, and you see the other block has moved to your left, this is referred to as a *left-lateral fault*. The opposite is true for a *right-lateral fault*.

Oblique faults



A fault that displays a combination of dip-slip and strike-slip fault movements is referred to as an *oblique* fault.

Now, test your knowledge:

Briefly define the following terms:

joint -

fault -

hangingwall -

footwall -

dip-slip -

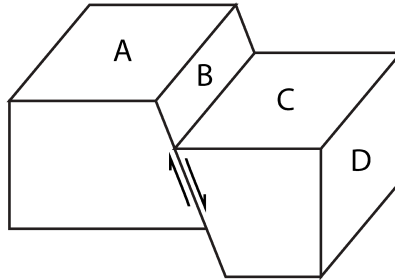
strike-slip -

oblique -

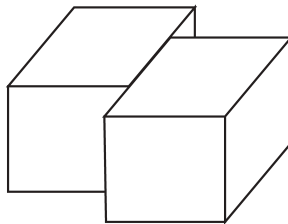
Answer the following:

1. True/False. A joint that has movement along the fracture surface is known as a fault.
 - A. True
 - B. False
2. The block that rests **above** the fault plane of a non-vertical fault is known as the _____ block.
 - A. Normal
 - B. Reverse
 - C. Hanging-wall
 - D. Footwall
 - E. Scarp
3. The block that rests **below** the fault plane of a non-vertical fault is known as the _____ block.
 - A. Normal
 - B. Reverse
 - C. Hanging-wall
 - D. Footwall
 - E. Scarp

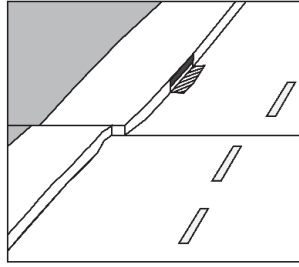
4. The fault type most associated with extensive tectonic forces is known as a _____ fault.
- A. Reverse
 - B. Thrust
 - C. Oblique
 - D. Normal



5. In the above image, which letter is located on the *fault plane*?
- A. A
 - B. B
 - C. C
 - D. D



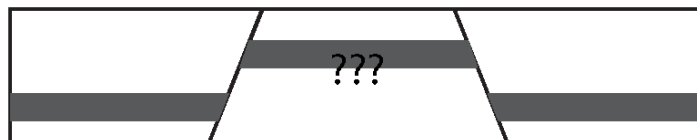
6. In the above image, what type of fault is displayed?
- A. Normal fault
 - B. Right-lateral fault
 - C. Reverse fault
 - D. Thrust fault
 - E. Left-lateral fault



7. In the above image, what type of fault is displayed?
 - A. Normal fault
 - B. Right-lateral fault
 - C. Reverse fault
 - D. Thrust fault
 - E. Left-lateral fault

8. When a block is bounded by normal faults, if it has moved **downward** relative to the bounding blocks it is referred to as a _____ block.
 - A. Normal
 - B. Reverse
 - C. Horst
 - D. Graben
 - E. Thrust

9. When a block is bounded by normal faults, if it has moved **upward** relative to the bounding blocks it is referred to as a _____ block.
 - A. Normal
 - B. Reverse
 - C. Horst
 - D. Graben
 - E. Thrust



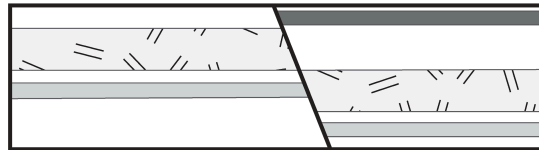
10. In the above image, you are given a cross-sectional view of the crust (the surface having been eroded flat). Decide what name you would give to the center block. (Hint: Use the grey marker beds, that have been offset, as a guide to recognize the sense of movement along the two high angle faults.)
 - A. Normal
 - B. Reverse
 - C. Horst
 - D. Graben

E. Thrust



11. In the above cross section image, what type of fault is displayed?

- A. Normal
- B. Reverse
- C. Horst
- D. Graben
- E. Thrust



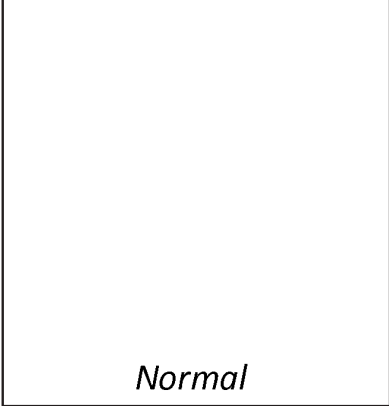
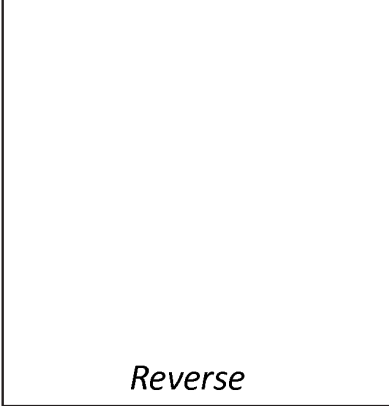
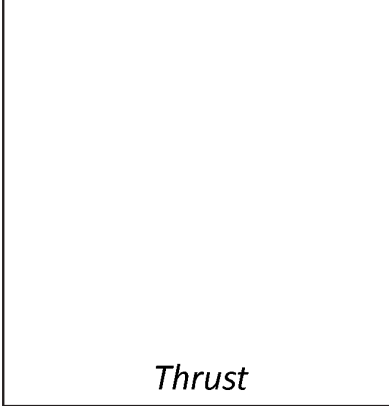
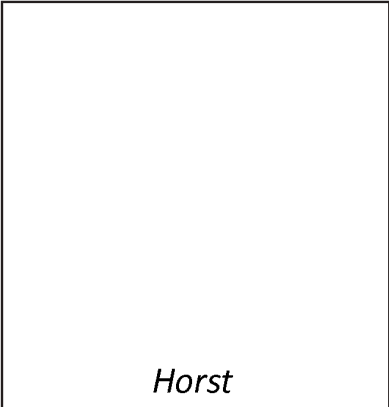
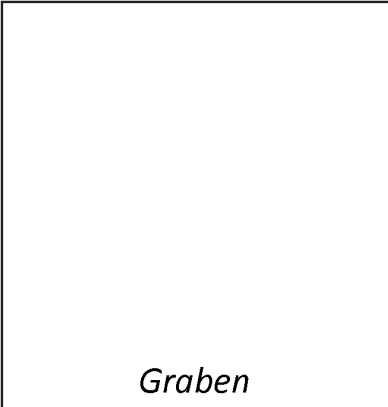
12. In the above cross-section image, what type of fault is displayed?

- A. Normal
- B. Reverse
- C. Horst
- D. Graben
- E. Thrust

Now, think deeper:

On your own:

13. Put away all of your notes. Draw the following types of faults to the best of your ability. They do not need to be 3D blocks, they can be 2D sections.

 <i>Normal</i>	 <i>Reverse</i>	 <i>Thrust</i>
 <i>Horst</i>	 <i>Graben</i>	

14. With your notes still out of sight, describe how you determine if a *strike-slip* fault is *right-lateral* or *left-lateral*.

Working in groups of 2 or 3

15. Compare your answers to questions 13 and 14. Write (draw) any differences between your answers and your partner's.