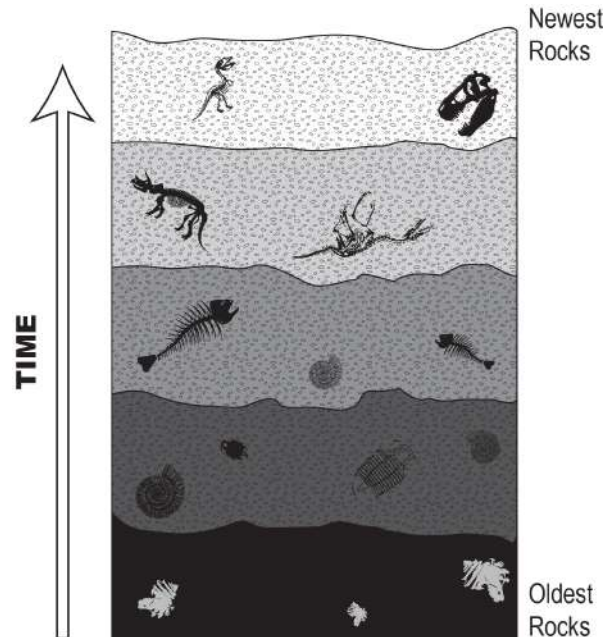


Relative Dating and The Law Superposition

Activity

Before scientists were able to determine the age of rocks by chemical tests, they had to rely on relative age dating. This technique places geologic events in the order of their appearance in the rock layers. In general, sediments and rocks are deposited horizontally so each rock layer is older than the layers above it. This is known as the Law of Superposition. If fossils are present in the rocks, they can be used to connect rock layers across large distances. Geologic processes such as folding, faulting, erosion, and the intrusion of magma can sometimes move rocks. By looking at all of the rock layers and the events that occurred, we can determine the order of events and determine the age of rock layers relative to the rocks around them.



Procedure

Part 1

1. One student in your group should place one hand in the center of the table.
2. Another student in the group should place one hand on top of the other student's hand.
3. This should continue until everyone's hands are stacked in the center of the table.
4. Answer the following questions in your lab journal:
 - a. Which student's hand was the oldest?
 - b. How do you know?
 - c. Which student's hand was the youngest?
 - d. How do you know?

Part 2

1. Look at the *Student Reference Sheet: What Happened First?*
2. Determine the order of events and write the order in your lab journal.
3. Answer the following questions in your lab journal:
 - a. Which layers were moved by the fault?
 - b. Did the magma intrude before or after the fault moved?
 - c. What was the first event to happen?
 - d. Which is the youngest layer?