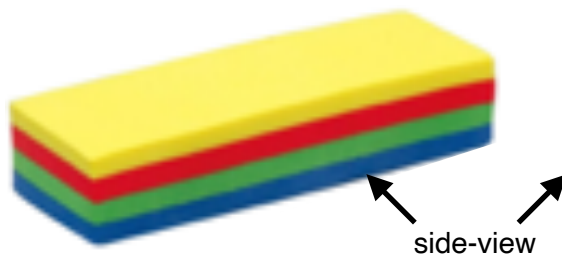


If I am a structural geologist...
I discover underground formations.

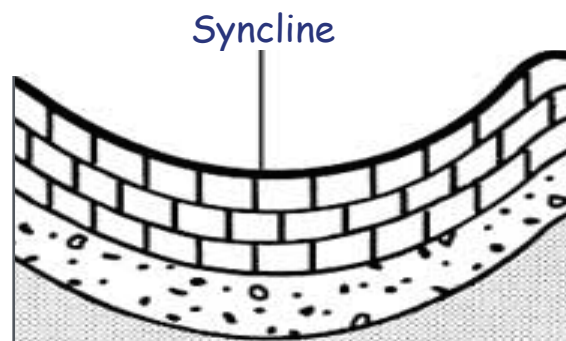
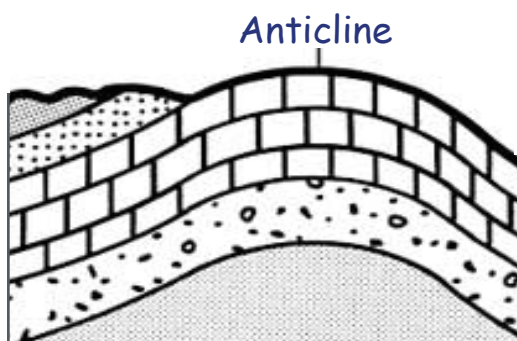
Experiment 6 Mighty Forces

You will need the fold and fault models (C).



Things To Know:

A fold occurs when a flat rock layer is bent or curved as a result of forces applied from both sides of the rock structure. Two types of folds are anticlines and synclines. In an anticline, the layers of rock are folded upward to form an arch. When the layers of rock are folded downward, the geologic structure is called a syncline.

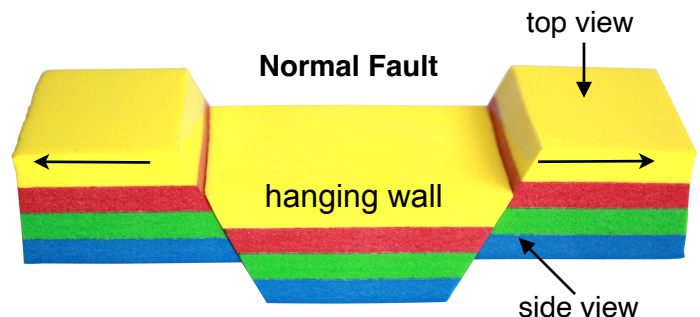


A fault is a crack in the Earth's crust. In an active fault, earthquakes cause rocks to move. Normal faults happen in areas where the rocks are pulling apart. In a normal fault, the hanging wall (middle section of the model) slips downward. A reverse fault forms when there are forces pressing inward on both sides of the rock structure. The hanging wall moves upward. A strike-slip fault forms when the rocks on either side of the fracture slide backward and forward or at different speeds in the same direction.



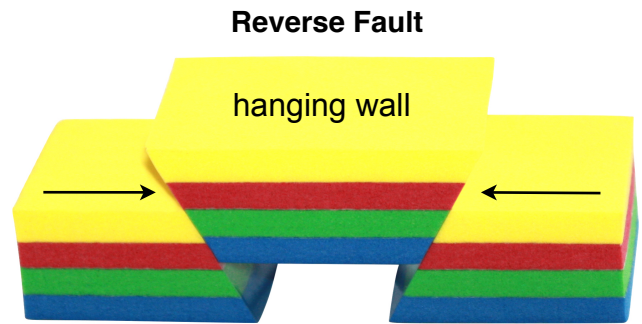
What To Do:

1. Bend the fold model to form an anticline. Draw and color the side-view of the anticline on the student sheet.
2. Bend the fold model another way to form a syncline. Draw and color the side-view of the syncline.
3. Answer the questions on the student sheet.
4. Use the fault model to demonstrate the types of faults: normal, reverse, and strike-slip. For the normal

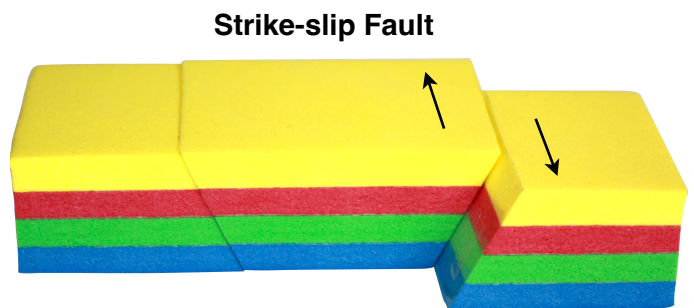


fault pull the end pieces apart slightly, allowing the center hanging wall to slide downward. Draw the top-view and side-view of the normal fault on the student sheet.

5. For the reverse fault, push the end pieces together slightly, causing the center hanging wall to be pushed upward. Draw the top-view and side-view of the reverse fault.



6. For the strike-slip fault, place the model on a level table. Slide one end piece forward. Draw the top-view and side-view of the strike-slip fault on the student sheet.



7. Answer the questions on the student sheet.

Challenge!

There are many seismically active fault lines in the world. Select an active fault and construct an explanation based on evidence for how geoscience processes have changed the Earth's surface along the fault line over a period of time.

Name _____

Date _____

Experiment 6: Mighty Forces

Anticline

Draw the side-view of the anticline.

Syncline

Draw the side-view of the syncline.

1. How are anticlines and synclines alike?
2. How are anticlines and synclines different?

3. What is a fault?

Normal Fault	
Draw the top-view of this fault.	Draw the side-view of this fault.

Reverse Fault	
Draw the top-view of this fault.	Draw the side-view of this fault.

Strike-Slip Fault

Draw the top-view of this fault.

Draw the side-view of this fault.

4. Name three types of faults.

5. Which type of fault is formed when forces press inward from both sides and the hanging wall moves upward?

6. The famous San Andreas fault in California is between the Pacific Plate and the North American Plate. The plates move side to side. What type of fault is the San Andreas fault?

