Name:_____

Period:_____

Faults
A model of three Faults

Construct the fault model

1. Color the fault model according to the color key provided.

2. Cut out the fault model and fold each side down to form a box with the drawn features on top.

3. Tape or glue the corners together. This box is a three-dimensional model of the top layers of the Earth's crust.

4. The dashed lines on your model represent a fault. Carefully cut along the dashed lines. You will end up with two pieces. Tape or glue a piece of construction paper on the side of the two fault blocks along the fault face.

Normal Fault

Locate points A and B on you model. Move point B so that it is next to point A. Observe your modes from the side (its cross-section). In the space provided draw a normal fault as represented by your model.

1. Which way did point B move relative to point A?

2. Are the rock layers still continuous?

3. Is this type of fault caused by tension, compression or shearing?

4. With this type of stress, what happens to rock layers X, Y, Z?

5. What likely happened to the river? The road? The railroad tracks?

River:

Road:

RR:

Reverse Fault

Locate points C and D on your model. Move point C next to point D. Observe the cross-section of your model. In the space provided draw a reverse fault as represented by your model.

1. Which way did point D move relative to point C?

2. Are the rock layers still continuous?

3. Is this type of fault caused by tension, compression or shearing?

4. With this type of stress, what happens to rock layers X, Y, Z?

5. What likely happened to the river? Road? Railroad tracks?

   River:

   Road

   RR:

Strike-slip fault

Locate points F and G on your model. Move the pieces of the model so that point F is next to point G. Draw an overhead view of the surface as it looks after movement along the fault.

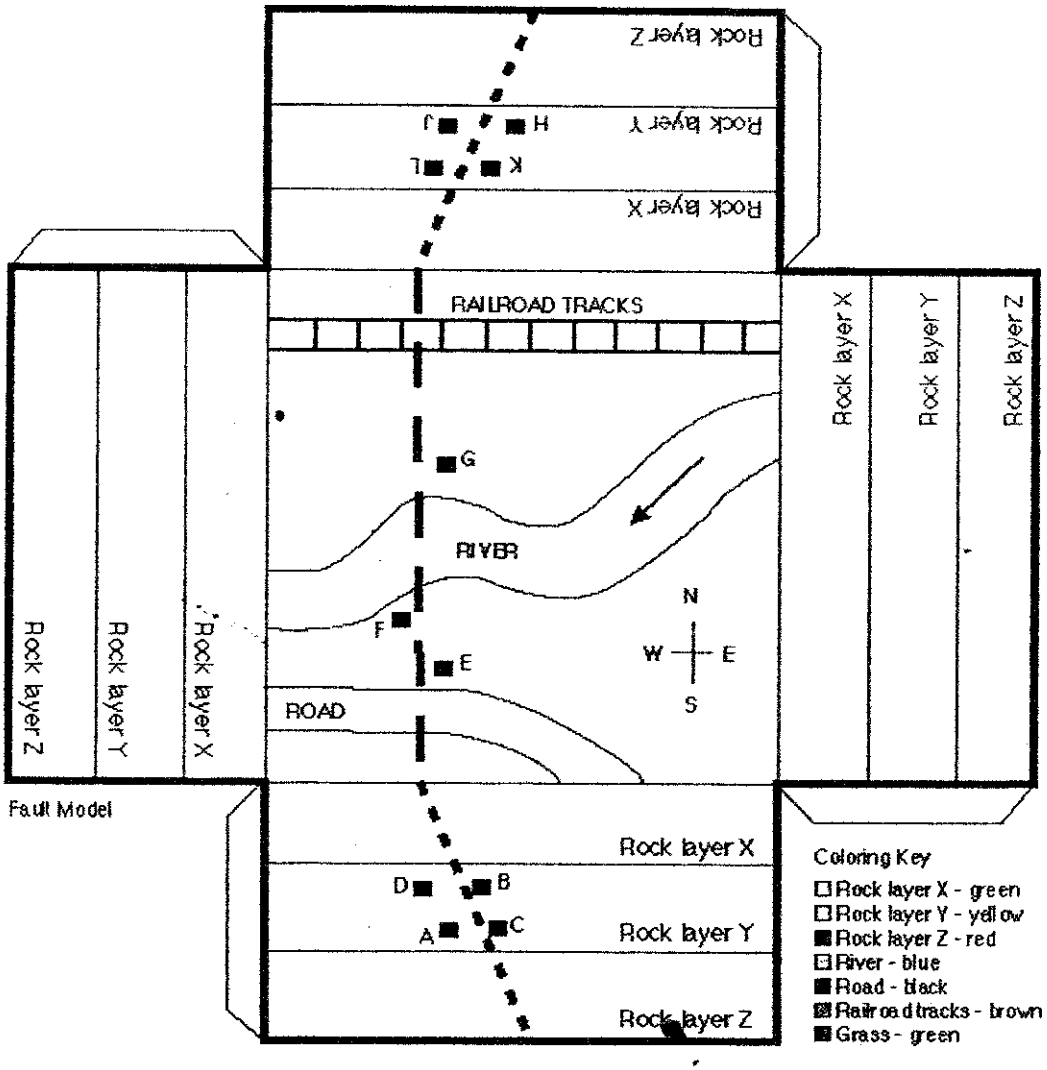
1. If you were standing at point F and looking across the fault, which way did the block on the opposite side move?

2. Is this type of fault caused by tension, compression or shearing?

3. With this type of stress, what happens to rock layers X, Y, Z.?

4. Are the rock layers still continuous?

5. If the scale used in this model is 1mm = 2 m, how many meters did the earth move when the strike-slip fault caused point F to move alongside point G? (Note that this scale would make an unlikely size for the railroad track!)


Rock layer Z
Rock layer Y
Rock layer X
J
H
L
K
RAILROAD TRACKS
Rock layer X
Rock layer Y
Rock layer Z
G
RIVER
F
E
ROAD
N
W
E
S
Rock layer Z
Rock layer Y
Rock layer X
Fault Model
Rock layer X
D
B
A
C
Rock layer Y
Rock layer Z
Coloring Key
Rock layer X - green
Rock layer Y - yellow
Rock layer Z - red
River - blue
Road - black
Railroad tracks - brown
Grass - green