Moving Plates

Activity 7

Notes on the activity

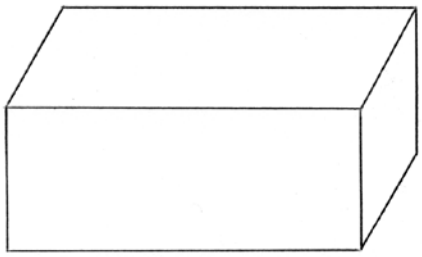
The San Andreas Fault runs roughly north and south through the state of California. The fault often cuts across farmland containing orchards, roads, and power lines. Farms located on the fault often have buildings, trees, roads, and streams move in two different directions during an earthquake. In this activity, students will design a farm scene, which contains some of these features and show how the surface features of the land changes after an earthquake.

Fault with a stream and plants offset

Materials

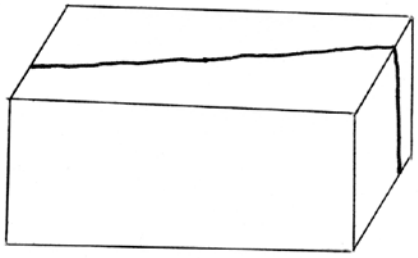
- 25 cm x 30 cm (10" x 12") piece of 3 cm (1.25") thick Styrofoam
- Variety of items to make a country scene
- Glue that will not melt Styrofoam
- Acrylic paint (non aerosol, which is non-toxic and can be used on Styrofoam.

Directions



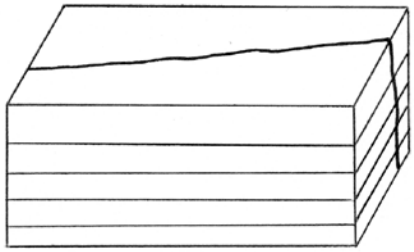
Step 1

1. Gather a variety of materials for a farm scene.
2. Plan the design on paper first.



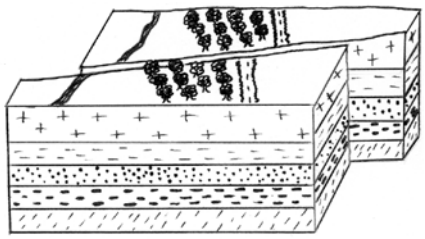
Step 2

1. Cut the Styrofoam at an angle the two pieces can be offset after the scene is built.
2. Paint the bottom layers of the fault block different colors.
3. Paint the top layer green, tan yellow or brown.



Step 3

1. Add other design elements like a road, path, vegetable garden, etc. that cross the fault.
2. Place the elements of the scene on both sides of the fault.
3. Add a power line for additional realism using toothpicks for the power poles and string for the wire.



Step 4

1. When you have constructed the scene, decide which direction will be north, east, south and west on the model.
2. Move one section of land 4 centimeters northward.
3. Glue the two pieces of Styrofoam together.

Extending the activity

- Make a model that includes hills and valleys. Conduct some experiments on what happens to the stream after the land shifts sideward during an earthquake.
- Create a model of a city built on a fault line.

Notes and drawings