

Tectonic Plates Mapping Activity

Purpose: This activity will provide you with a visual of the tectonic plates found on earth. It will also help you define different types of plate boundaries and provide an explanation for how continental drift and sea-floor spreading are possible.

Background: The theory of plate tectonics links together the ideas of continental drift and ocean-floor spreading. It explains how the earth has evolved over time and how the Earth's crust has been shaped. The lithosphere, which consists of the crust and a thick layer of relatively cool, rigid mantle rock, is made up of a number of plates. These plates usually contain both continental and oceanic crust. Divergent plate boundaries are formed by mid-ocean ridges and convergent plate boundaries are formed by the trenches. Transform boundaries are formed by lateral faults at which two plates slide horizontally past each other. Some scientists hypothesize that the plate movement is caused by convection currents in the mantle. Understanding how the plates have moved in the past makes it possible to predict their movement in the future.

Procedure:

Follow the instructions below to complete the map on the backside of this paper. Use the internet to help you find examples.

Step 1: Sketch with a pencil the outline of the following plates. After you are happy with the boundaries, go over your lines with a black pen or marker to make them more distinct.

Eurasian Plate
Arabian Plate
African Plate
Scotia Plate
Cocos Plate

Indian Plate
Australian Plate
Philippine Plate
South American Plate
North American Plate

Nazca Plate
Juan de Fuca Plate
Pacific Plate
Caribbean Plate
Antarctic Plate

Step 2: Label the plates that you sketched in step 1.

Step 3: Highlight the boundaries with three different colors depending on if they are convergent, divergent, or transform boundaries. Make sure to include a key.

Step 4: Based on the information in Step 3, draw arrows along the plate boundaries indicating which direction they are moving.

Step 5: Write a paragraph which includes the following:

- 3 observations about the plate boundaries.
- A connection between tectonic plates and continental drift
- A connection between tectonic plates and sea-floor spreading

