
LAB 16

Tectonic Plate Boundaries

Purpose

The purpose of this lab is to have you identify the three ways in which tectonic plates can interact, and how these interactions explain the geologic processes of mountain building, volcanoes, deep ocean trenches, mid-ocean ridges, rift valleys, earthquakes, and sea floor spreading.

Materials

colored pencils

map of the tectonic plates

Procedure

Complete the following steps.

1. Using the map in Figure 16–1 that shows the tectonic plates from your textbook, shade in the three different plate boundaries and label their names on the map provided. Use a different colored pencil for each different type of plate boundary. Create a key that shows the color that represents each plate boundary.
2. Choose another colored pencil to add the arrows of movement associated with each plate boundary.
3. Label all of the names of the major tectonic plates in another color on your map.
4. Use your tectonic plate map to identify the different type of plate boundaries and the specific tectonic plates that form each geologic region shown in Table 16–1.

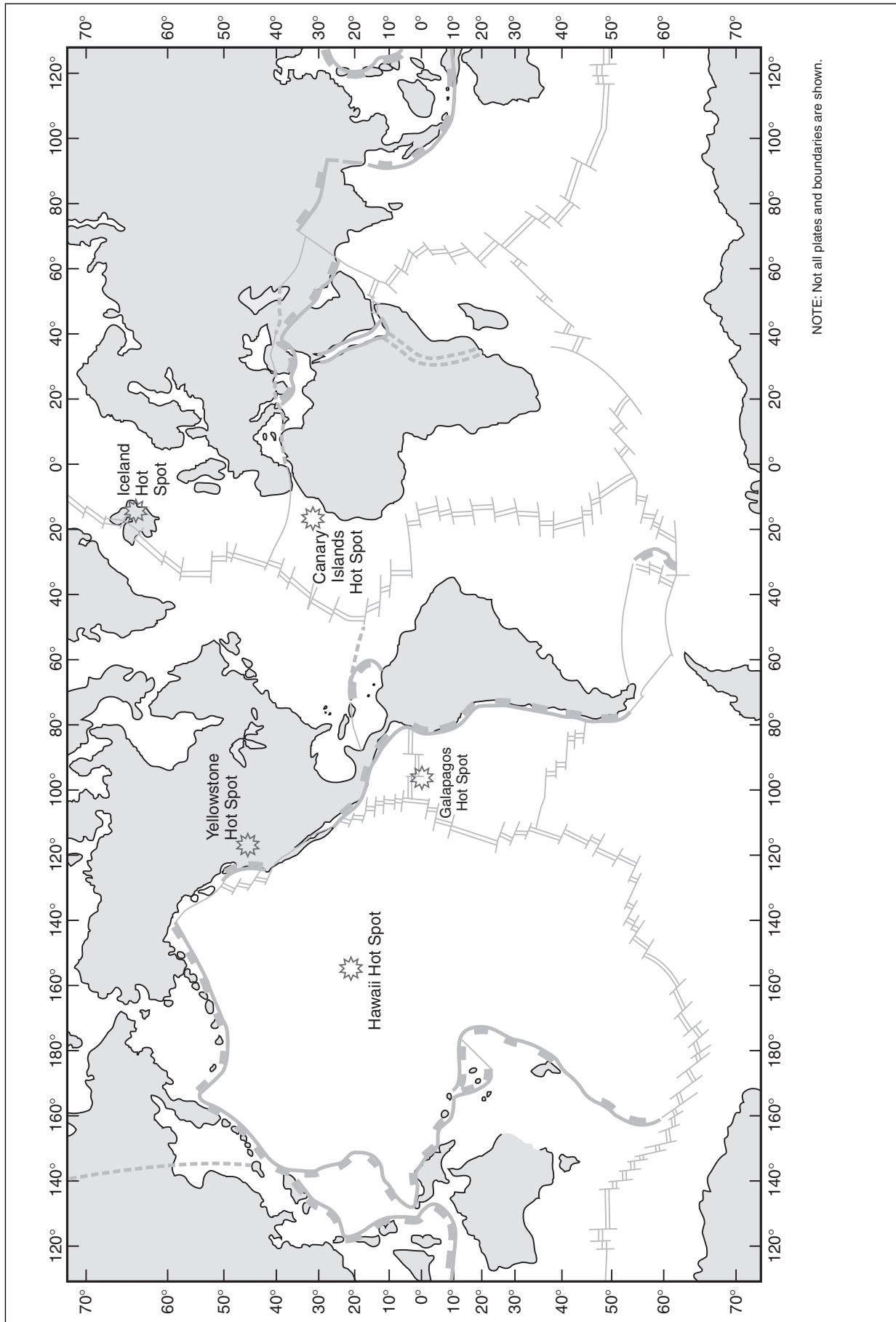


FIGURE 16-1 Tectonic Plates

TABLE 16–1 Geological Plate Boundaries

Geologic Region	Type of Plate Boundary	Tectonic Plates Associated with the Boundary
Mid Atlantic Ridge		
Tonga Trench		
East African Rift		
Peru-Chili Trench		
East Pacific Ridge		
Mariana Trench		
San Andreas Fault		
Himalaya Mountains		
Andes Mountains		
Cascade Mountains		
Aleutian Trench		
Mount St. Helens		

Conclusions

1. What are the three different types of tectonic plate boundaries?
2. Which geologic features on the Earth are associated with divergent plate boundaries?
3. Describe the three ways in which the Earth's crust can interact at convergent plate boundaries.
4. Explain the tectonic process known as subduction.
5. Which geologic features are associated with convergent plate boundaries?
6. Describe the interactions of tectonic plates around a transform fault boundary.
7. What geologic feature is associated with a transform fault boundary in the United States?