

The Fractured Earth

Name:

Period:

Scientists believe that the earth's crust is divided into large plates. These may have moved in the past, and may still be moving. Where are the boundaries of these plates? The puzzle in this activity will show you. Just follow the direction below.

1. Cut out the puzzle pieces along the DARK black lines. (Careful!)
2. Fit the pieces together as you would a jigsaw puzzle. Paste the assembled puzzle onto a larger piece of paper.
3. Use a brown pencil to lightly shade in all the landmasses. Use a blue pencil to lightly shade in all oceans.
4. The edges of each puzzle piece are plate boundaries. The names and the direction of motion are noted in the chart below. Label each plate on your map.
5. With a black pencil place arrows on each plate showing its direction of motion.
6. Outline the plate boundaries according to movement:
 - a. Red = divergent
 - b. Green = transform
 - c. Blue = convergent
7. Place a key on your paper to identify the different boundaries.
8. Answer the following questions once you have finished your map.

Plate Name	Direction of Motion	Plate Name	Direction of Motion
American Plate	West	African Plate	Northeast
Pacific Plate	Northwest	Eurasian Plate	East-Southeast
Indo-Australian Plate	Northeast	Antarctic plate	No Motion
Caribbean Plate	Northeast	Cocos Plate	Northeast
Nazca Plate	East	Philippine Plate	West

QUESTIONS:

1. Where are most of the divergent plate boundaries found? On land or in oceans?
2. What might the earth's surface look like at the divergent plate boundaries? (type of formation)

3. Why might Iceland be a dangerous place to live? Mark Iceland with a black dot on your map.

4. Name the plates that don't have a lot of land on them. (name 3)

5. Name the plates that do have a lot of land on them. (name 2)

6. At what type of plate boundary are the most ocean plates being subducted or destroyed?

7. At what type of plate boundary is new crust being made?

8. Do continental plates get destroyed like ocean plates? Explain.

9. What kind of boundary do we live near?

10. What kind of tectonic activity do we experience here in California?

