

Where Are the Plates?

Summary

Students will use the trenches, ridges and rises to determine the plate boundaries on Earth.

Time Frame

1 class periods of 60 minutes each

Group Size

Individual

Materials

red, blue, black fine line markers, colored pencils.

- [Map of the world](#)

showing labeled features of the seafloor. One is attached on this web site. You will need to print it off the website on the best printer you have and make copies from it. It will be most readable if copied on to legal size paper. You might want to have some better maps available for students to look at to help decipher the names.

- [student sheet](#)
(attached)

Background for Teachers

Students need to know that plates are moving away from ridges or rises and sinking and disappearing in trenches. They should have had experience with cutaway diagrams showing convection currents under the crust moving the plates. Emphasis that this activity looks at the plates from the top and not the sides and uses geographic features to identify types of plate boundaries. Students should notice that nearly every plate has an area where new plate is being formed and moving outward from and an area where the plate is sinking and being remelted.

Instructional Procedures

Discuss the ideas from the "background" if you have not already.

Read the procedures with the students.

Give students time to label the ridges and trenches. Do not direct them to their textbooks, which typically have maps of the plates.

The map provided on this web site (attached) has a darkened, dotted line to help students find all the plate boundaries. Every part of this line should be colored either red, blue or black. If you would rather use a more accurate map try: [This Dynamic Planet map](#), and print off the "This Dynamic Planet" map. Make a black and white copy for each of your students.

Students should label the plates and MOST importantly, draw arrows on them showing which way they are moving (away from the red ridges, towards the blue trenches) and naming them. Some plates are being crushed like the Philippines and Africa is moving towards the Mediterranean Sea.

If there is time, the plates can be colored with colored pencils.

Assessment Plan

Scoring Guide

:

1. Student identifies plate boundaries correctly.....4
2. Student labels plate movement and names it correctly.....4
3. Analysis questions are answered correctly.....4

Answers:

- to the West
- to the North
- Iceland
- Mid Atlantic Ridge
- Mid Indian Ridge
- Mid Atlantic Ridge
- Middle American and Aleutian Trenches
- Between North and South America

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

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