Where Are the Plates?

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

Main Core Tie
Science - Earth Science
Standard 2 Objective 3

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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