

## **More Marine Geology: Sea Floor Spreading**

Activities from: NOAA Ocean Explorer <http://oceanexplorer.noaa.gov/welcome.html>

### **Objective:**

To apply understanding of basic plate tectonics to examples of Pacific marine geology, in particular sea floor spreading.

### **Materials:**

Galapagos spreading center instructions  
Galapagos student worksheet  
Galapagos student handout  
Red transparency  
Biggest Plates activity instructions  
Biggest Plates handout (plates)  
Biggest Plates handout (magnetic anomalies)  
Hot spot instructions

### **Activity:**

This activity pulls from two NOAA activities focused on the geology of specific sites in the Pacific. Remember to refer to your National Geographic map to try to observe some of these features.

#### The Biggest Plates on Earth

This activity is middle-school level, but I have included it because it focuses on the Juan de Fuca plate off the coast of the Pacific Northwest. The activity has students take a closer look at the plates in the Pacific, and learn about how magnetic anomalies allow scientists to locate sea floor spreading centers. Refer to the included handout for specific activity background and instructions.

#### The Galapagos Spreading Center

After learning about sea floor spreading centers, students will investigate one more closely. This activity involves a teacher demonstration of how sea-floor spreading works, and a handout encouraging students to think about the Galapagos site. The included handout has specific instructions and a teacher key for the worksheet.

#### Chocolate Lava!

Finally, this (edible) activity allows students to simulate how new sea floor is formed at spreading centers. Refer to the Chocolate Lava instruction sheet.

I have also included a NOAA Explorations activity on hotspots and island formation. It looks like a really fun activity if your club is ambitious and has the time!