

Sea Floor Spreading Questions:

Answer these questions in your notebook!

1. What does the slit in the center of the paper represent? What direction are plates moving at this location?
2. What do the strips of paper represent?
3. What mineral is in the rock that points north or south? What happened in Earth's history that caused the minerals to point in different directions?
4. In relation to the mid-ocean ridge, where is the newest rock found?
5. In relation to the mid-ocean ridge, where is the oldest rock found?
6. What happens to the seafloor at the slits on the outside edges of the paper? What direction are plates moving at this location?
7. Which crust will sink (ocean or continent)? Why?
8. What might the crust look like at these subduction zones?
9. Where the crust is melting it often bubbles back up, what might form where it bubbles back up onto the crust?
10. What is happening in the mantle to cause seafloor spreading?
11. What are the 2 sources of heat in the core of the Earth?
12. The ocean floor is only 180 million years old, though the Earth is about 4.5-5.0 billion years old. *Why is the ocean floor so young?*
13. What happens to the size of the ocean floors due to seafloor spreading at mid-ocean ridges?
14. What would happen to continents that were attached to ocean crust on either side of the mid-ocean ridge?
15. What type of plate boundary is at the mid-ocean ridge? What type of plate boundary is at the edge where the ocean collides with the continent?
16. Draw *and label* a top view diagram of seafloor spreading. Include: ridge, rift, youngest rock, oldest rock, and two polar reversals (N → S = one reversal)
17. Draw two convection currents under the mid-ocean ridge to explain the plate motion we see there.