

PLATE TECTONICS - A NEW THEORY

After WWII, new evidence allowed scientists to revise and improve the original continental drift theory. This new theory is referred to as plate tectonics. You will work through different activities to complete this worksheet to research and discover some of the new information.

Activity 1 – Ocean Floor Model and Magnometers

Observe the following model to help answer the questions that follow.

1. **Slowly** slide the compass across the model of the ocean floor. What happens to the compass needle as it slowly moves across the model of the ocean floor?
2. What would **cause** the needle of the compass to change?
3. What **pattern** do you notice as you continue to slide the compass slowly across the ocean floor model?

Activity 2 – Inside Planet Earth

Answer the following questions while observing the video clip from Inside Planet Earth documentary

4. What did the narrator compare using seismic waves to learn about the Earth's interior? How is it similar?
5. Describe how the mantle is like a lava lamp.
6. Where does the heat that makes convection currents come?
7. What are 2 sources of heat that makes the earth's interior hot?
8. How does water trapped inside the earth make it back to the surface?
9. What is a hot spot volcano?

Activity 3 – Plate Tectonic Boundaries

Use the amazing textbook of knowledge (red textbook) pages 177 – 179 to complete the data table and answer the following questions.

10. What is plate tectonics?

11. What is a ridge push?

12. What is a slab pull?

13. Fill out the data table to identify the 3 boundaries created at tectonic plate boundaries

Boundary Name	Direction of Motion	Cause & Effect of the Motion	Drawing of Boundary Motion

14. What is a subduction zone?

15. Why are there 3 different types of convergent boundaries?