

Theory of Plate Tectonics

1A. Make a simple drawing to explain what happens at **divergent boundaries**.

1B. Where in the world are most of the divergent plate boundaries located?

2A. Make a simple drawing to explain what happens at **convergent boundaries**.

2B. Where are most oceanic-continental convergent boundaries located?

2C. What geographic features occur where oceanic-oceanic convergent boundaries occur? Give three examples.

2D. What geographic features occur where continental-continental convergent boundaries occur? Give three examples.

3A. Make a simple drawing to explain what happens at **transform fault boundaries**.

3B. Where do most transform faults occur?

3C. What is the most famous transform fault (strike-slip fault) system on continents?

4A. What is **seafloor spreading**?

4B. What important geographic feature has formed by sea-floor spreading?

4C. Are earthquakes here deep or shallow?

5A. What are **subduction zones**?

5B. What geographic features occur at subduction zones?

5C. Are earthquakes here deep or shallow?

6A. What kind of plate boundary produces the volcanoes of the Andes and the Peru-Chile trench?

6B. Where is another part of the world where this type of plate boundary exists?

7A. What kind of plate boundary produces the Aleutian archipelago and the Aleutian Trench?

7B. Where is another part of the world where this type of plate boundary exists?

8A. What kind of boundary produces the Himalayas?

8B. What are some other mountain ranges produced by this type of plate boundary?

9. What feature in ocean basalts provides strong evidence of seafloor spreading? How did this form?

10. According to ocean drilling evidence, what happens to the age of the ocean floor as a ship travels **from the continental margin to the mid-ocean ridge crest**?

11A. What are **hot spots**?

11B. What evidence do the Hawaiian Island and Emperor Seamounts provide to support the theory of plate movements?

12. What do most scientists consider to be the basic "driving mechanism" behind plate movement?

13. In the chart below, compare the **slab-pull** and **ridge-push** mechanisms that produce the forces behind plate tectonics.

slab-pull	ridge-push

14. What might be the source of the energy that melts mantle rocks?

15. In the space below, make a simplified drawing to represent what happens during plate tectonics.