

Note-taking Worksheet (continued)**Section 3 Theory of Plate Tectonics****A. Plate movements**

1. Earth's _____ and upper mantle are broken into sections.
2. The sections, called _____, move on a plasticlike layer of the mantle.
3. The plates and upper mantle form the _____.
4. The plasticlike layer below the lithosphere is called the _____.

B. Plate boundaries

1. Plates moving _____—divergent boundaries
2. Plates moving _____—convergent boundaries
 - a. Denser plates sink under less _____ plates.
 - b. Newly formed hot _____ forced upward forms volcanic mountains.
3. Plates collide
 - a. Plates crumple up to form _____ ranges.
 - b. _____ are common.
4. Plates slide past—called _____ boundaries; sudden movement can cause earthquakes

C. Convection inside Earth—the cycle of heating, rising, cooling, and sinking of material inside Earth is thought to be the _____ behind plate tectonics.

D. Features caused by plate tectonics

1. Faults and _____ valleys
2. Mountains and _____
3. Strike-slip faults—cause of _____

E. Testing for plate tectonics—scientists can measure _____ as little as 1 cm per year.