

Plate Tectonics PhET simulation INTRUCTIONS

Learning Objectives:

- I can describe the differences between continental and oceanic crust.
- I can identify and describe the three types of plate boundaries .
- I can describe the geologic features created by each type of plate boundary.

Go to phet.colorado.edu. Click on the orange “Play With Sims” button. On the right side of the screen, choose the “Earth Science” category. Run the “Plate Tectonics simulation.

Part I:

1. Begin with the “Crust” tab. Under “View,” (*lower right corner*) check “Both” and “Show Labels.” To use the tools, drag them out from the lower left corner to qualitatively compare the thickness, density, and temperature of the oceanic and continental crust samples. Complete the table under **part 1** on the tectonics worksheet and answer the questions.

Once part one is complete, move on to part 2.

Part II:

Now go to the “Plate Motion” tab. Under “View, check “Both,” “Show Labels,” and “Show Sea Water .” for the oceanic crust. Also click in the box, “automatic mode” Experiment with different types of crust at the plate boundary and answer the questions. In order to play the simulation, hit the play button.

Key

Note the following vocabulary words

<i>Convergent Plate Boundary</i>	A boundary at which two plates move toward each other ⇒⇐
<i>Divergent Plate Boundary</i>	A boundary at which two plates move away from each other ⇐⇒
<i>Transform Plate Boundary</i>	A boundary at which two plates move parallel to each other in opposite directions ↑↓
<i>Subduction</i>	One plate moves under another ⇓⇐

