**TABLE COPY WIELAND ROOM 817**

**Student Interaction Sheet**

7.1 Volcanoes and Plate Tectonics, p. 117

QUESTION AND ANSWER Interaction Sheet

Y N Do scientists have any direct way to measure temperatures deep within the earth?

Y N They can analyze seismic waves and heat flow near earth’s surface to estimate these temps, ………….right?

Y N Looking at figure 7-1, it seems like the rocks in the mantle are kept ABOVE their melting point ………….by all the pressure there. Right? This means rocks would be fully melted here, huh?

Y N Actually, what is true is that the rocks of the asthenosphere are kept solid because of the great ………….pressure of the surrounding rock, right? Even though there is an extremely high temperature ………….there, huh?

Y N There is that occasion where rock will melt in this high pressure zone to become molten …………magma, right?

Y N Any activity that includes the movement of magma toward or onto the surface of the earth is ………….called volcanuistism, right? Did I type that correctly?

Y N Once a magma pocket is made, it then rises because it is more dense than the surrounding solid ………….crustal rock, correct?

Y N Sometimes when magma slowly pushes upwards, large blocks of overlying rock can break off …………and melt which adds even more molten material in the magma pocket. I got that correct, right?

Y N Most magma forms at plate boundaries, without a doubt.

Y N It’s usually at subduction zones where most magma is formed, right? And also it’s usually a …………situation where denser continental crust is subducted beneath less dense oceanic crust. I got it …………correct, didn’t I?

Y N Let’s see if I have this deal with the water correct: water from the subducting plate enters the ………….hot asthenosphere, causing mantle material to melt into molten magma.

Y N Lava is what it is called when magma comes out onto earth’s surface, right? And it comes up ………….through a vent, do I have it correct?

Y N We call the structure that is formed by the vent plus the volcanic material that collects around ………….the vent a volcano, right?

Y N So, you can plot the location of the 600 or so volcanoes that have occurred in the last 50 years ………….and see a pattern across the earth, is that right? If so, then we better try that!