The Earth's Structure, the Plates, and the age of rocks

Directions:

Using the Information on the screen in the front of class and the worksheet, complete the following.

1) Draw a diagram of the interior of the Earth.
2) Label the Inner and Outer Core, Mantle, Asthenosphere, Crust, and lithosphere.
3) Label whether the cores are solid or liquid.
4) Show and label where the heat is coming from and the convection cells the heat produces.
5) Label the source of heat in the core, and explain why the convection happens (why does the hot go up and what causes It to cool and go down).
6) Show a P wave and an S wave moving through the interior of the Earth and explain what it is doing (What can't S waves go through?).
7) Show where a convergent and divergent plate boundary would be in your diagram.
8) Using the link http://www.geocoops.com/the-moving-earth.html label where the oldest rocks would be on the surface of your model and where the youngest rocks would be.

Answer in Complete Sentences in your notebook.

1) What is the source of heat in the core?
2) What causes the magnetic field around the Earth?
3) What 2 things drive the convection in the mantle/asthenosphere?
4) How do we know the outer core is molten/liquid?
5) Why are there multiple layers of the Earth?
6) Based on the maps on the website above and your diagram, where are the youngest rocks on Earth?
7) Where are the oldest rocks on Earth?
8) What type of plate boundary is new rock forming?
9) What type of plate boundary is old rock being recycled?
10) What type of plate boundary is no new rock being formed or old rock being recycled?

Claim, Evidence and Reasoning (CER)

Your Claim should be able to answer the question. Your evidence should support your claim. Your reasoning explains how the evidence supports your claim.

Claim: Are the Plates Moving?

Evidence: Using the answers from your questions use these questions as a guide: How do we know the Earth's plates are moving based on what the interior of the Earth is made of, how heat is transferred, the age of rocks on the surface and the types of plate boundaries that are created?

Reasoning: How does your evidence support your claim?