

## Earth's Interior and Waves Test Study Guide

1. What do **radioactive decay** and **gravitational energy** have to do with thermal energy inside of the Earth?

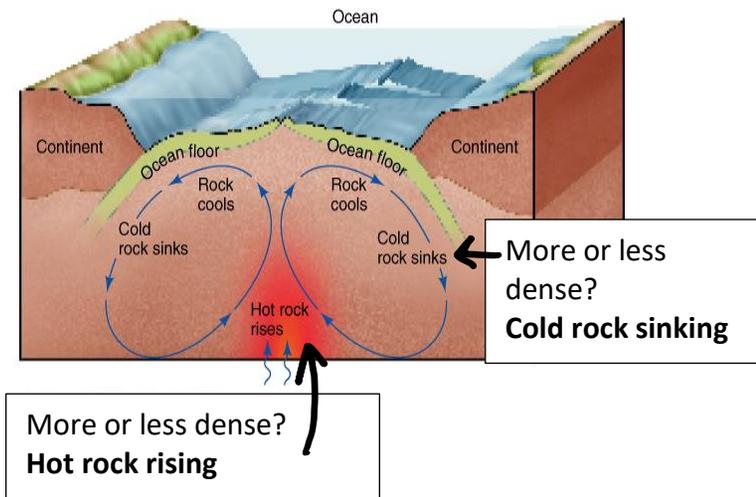


Glue this side into your notebook



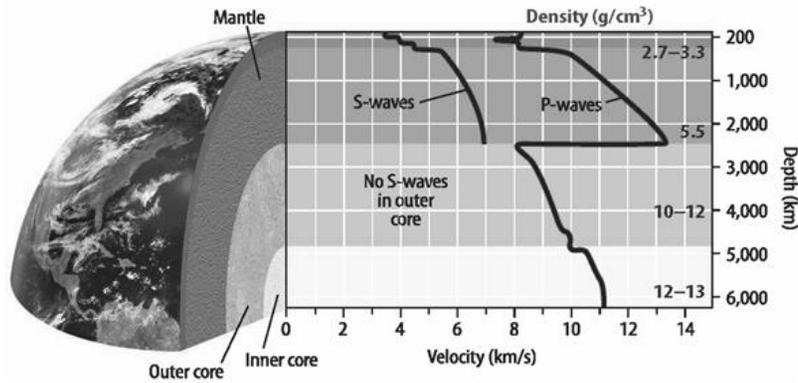
2. a. What is the term used to describe the *movement of more and less dense material inside of the Earth*?

b. Label the boxes that correspond to the diagram where the substance is more and less dense:



c. Which layer of the Earth are convection currents located?

d. Explain why convection currents happen using the ideas of density AND temperature.

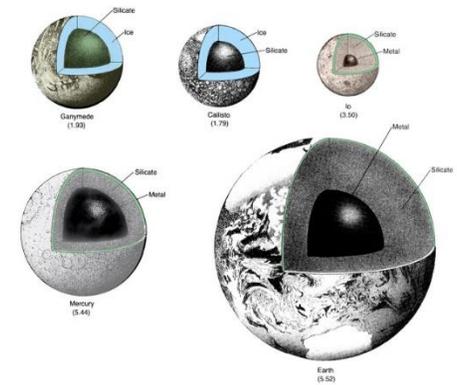


**3. Use the graph above for the following questions.**

- a. Circle on the graph where there is a transition between layers. What happens to the speed of the waves when they enter a new layer?
- b. What do we know about outer core and what data shows us this?
- c. What do you know about the density change from the outer to the inner core? What evidence do you have from the graph for this relationship between speed of seismic waves and the density of the medium they travel in?
- d. Which layer of Earth is the deepest? Which layer of Earth is the densest?

**4. Use the image to help you with the questions.**

a. What does planetary differentiation mean?



b. Using the image to the right, where are the densest layers in each planet?

c. What force causes this to happen?

d. What 2 things contribute to the heat inside of Earth and other planets?

**5. Use the diagram below for the following questions.**

a. Circle where a wave refracts in the diagram.

b. Why do waves refract in Earth?

c. Draw a wave and make it reflect off a layer.

d. What is different between the layers that causes waves to travel faster, slower, reflect or refract?

