**Study guide**

**Interior of the Earth/Rock cycle Test**

**Friday, February 12**

* Explain provided scientists with data that allowed them to identify the layers of the Earth and what they are made up of.
* Label and describe the compositional and structural layers of the Earth.
* Identify the differences between P & S waves.
* Describe the evidence that lead to Wegener’s Plate Tectonic Theory
* What was the evidence that finally supported Wegener’s theory after his death?
* Describe the interaction or movement at each type of plate boundary
* Identify land features that form at each type of plate boundary and how they form.
* Explain how plate movement influences the rock cycle.
* Explain the causes of plate movement in terms of mantle convection, ridge push and slab pull.
* Describe and calculate the motion history of plates using equations
* Explain how scientists determine where plate boundaries are located.

STANDARDS ASSESSED ON THIS TEST:

E3.1B Explain the relationship between the rock cycle and plate tectonics theory in regard to the origins of igneous, sedimentary, and metamorphic rocks.

E3.2B Explain how scientists infer that the Earth has interior layers with discernable properties using patterns of primary (P) and secondary (S) seismic wave arrivals.

E3.2C Describe the differences between oceanic and continental crust (including density, age, composition)

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| E3.3A Explain how plate tectonics accounts for the features and processes (sea floor spreading, mid-ocean ridges, subduction zones, earthquakes and volcanoes, mountain ranges) that occur on or near the Earth's surface. |
| E3.3B Explain why tectonic plates move using the concept of heat flowing through mantle convection, coupled with the cooling and sinking of aging ocean plates that result from their increased density. |
| E3.3C Describe the motion history of geologic features (e.g., plates, Hawaii) using equations relating rate, time, and distance. | https://chippewavalleyschools.rubiconatlas.org/common_images/icons/remove_805.png?v=Atlas8.1.1.222 |
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| E3.4A Use the distribution of earthquakes and volcanoes to locate and determine the types of plate boundaries. |