Review Guide **Unit 2 –**

**Plate Tectonics**

NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

It is important to review your learning before you take an assessment because assessments are worth 70% of your grade. Learning requires **practice** and completing the questions below will help you **practice** for the assessment. If you do not **practice**, you may not score well. In order to have the opportunity to re-take an assessment, I need to know that you have completed the **practice** first in order to be successful. Therefore, if you think you may wish to re-take an exam on the following Wednesday after school or during your lunch, the review guide must be complete and turned in at the beginning of the period on the day of the test. Students may only earn ½ credit back on the points that were missed.

**Important Vocabulary:** You do not have to define the words, but you do need to understand them.

crust subduction theory of plate tectonics

core fault transform fault

mantle sonar mesosaurus

convection current marsupials continental drift

Wegener plate boundary lithosphere

volcano magma lava

divergent convergent sea floor spreading

magnetic reversal trench mountain

plate geochronology volcanology

seismology geography transform boundary

strike/slip boundary richter scale continental crust

oceanic crust ridge continental shelf

mid-ocean ridge hot spot Fossil

**Review Questions:**

***Learning Target 1:*** Draw a labeled diagram showing how *convection* in the upper *mantle* drives movement of *crustal plates*.

***Learning Target 2:*** *Describe* what may happen when plate boundaries meet (e.g., earthquakes, *tsunami*, *faults*, mountain building), with examples from the Pacific Northwest.

1. Who came up with the Theory of Continental drift?
2. Explain the Theory of Continental Drift and the pieces of evidence that support the theory. (Explain at least 3 pieces of evidence).
3. What term was given to Wegener’s “supercontinent?”
4. What device is used to measure the depth of the ocean by bouncing sound waves from the ocean floor back to the surface?
5. Fill in the table below to review the lesson, Exploring Geography.

|  |  |  |
| --- | --- | --- |
| **Mountain Range** | **Continent** | **Are volcanoes present? Yes or No** |
| Alps |  |  |
| Appalachians |  |  |
| Andes |  |  |
| Cascades |  |  |
| Himalayas |  |  |

1. Why do Asia, Africa, and Australia have few volcanoes compared to North America and South America? Is the distribution of volcanoes around the world random? Explain.
2. What are 3 differences between rock on the continent and rock on the seafloor?
3. What is a magnetic reversal? Which type of rocks respond to the Earth’s magnetic pull?
4. Explain seafloor spreading. Include a diagram. (Use page 11 in your science notebook if you need help).
5. Which ocean is getting larger?
6. Are rocks closest to the mid-Atlantic ridge younger or older? Explain.
7. What 4 specialty groups were used when we looked at maps as a class?
8. Define lithosphere.
9. What is the Theory of Plate Tectonics?
10. What evidence was gained to change the theory of continental drift into the theory of plate tectonics?
11. Explain the 3 types of plate boundaries (convergent, divergent, transform). Include a diagram of each to aid in your explanation.
12. What is a hot spot and how does it form volcanoes?
13. How were the Hawaiian Islands formed?
14. What 3 plate interactions form volcanoes?
15. What are the two types of waves seismologists use to predict the epicenter of an earthquake? (Refer to the Tsunami video questions page 18 in your science notebook if you need help).
16. Diagram the following and show how they relate. Mid-oceanic ridge, trench, oceanic plate, continental plate, convection current, mantle, convergent boundary, divergent boundary, volcano. In the diagram, show where the mantle is denser and where it is less dense. (Use your science notebook page 20 if you need help).
17. Where are convection currents located? Explain how convection currents move the tectonic plates.
18. The Juan de Fuca plate is subducting under which other plate?
19. Name 4 Tectonic Plates.

This exam is cumulative. You will also be responsible for the material you learned in Unit 1: Rocks and volcanoes. The questions below will help you to further prepare for the exam. Learning requires practice!

**Review from Unit 1: Rocks and Volcanoes**

1. What is an anticline? A syncline? How do they form? Include a diagram.
2. What are the three types of rocks?
   1. Which rock is formed at extreme temperatures?
   2. Which rock is formed when molten rock cools and hardens?
   3. Which rock is formed from cemented sand and dirt?
3. What type of rock holds fossils?
4. What atom is located in the Earth’s core?
5. Know the three different types of volcanoes, characteristics, and examples of each. Study your volcano activity, quiz, and science notebook notes.
6. The type of lava may affect the shape of the volcano. Shield volcanoes are low to the ground and composite volcanoes are tall. Explain this difference using a labeled diagram. Use the terms: low viscosity and high viscosity in your explanation.
7. Which volcano is largest in width?
8. Mt. St. Helen’s is an example of what kind of volcano? What year did Mt. St. Helen’s erupt?
9. Paricutin is an example of what type of volcano?
10. Mauna Loa is an example of what type of volcano?