**Earth’s Interior Model**

Your model must show….

1. Earth’s interior layers labeled based on physical properties- lithosphere, asthenosphere, mesosphere, outer core, inner core.
2. Earth’s interior layers based on composition- curst, mantle, core.
3. Oceanic and Continental crust on the outside of your model.
4. P and S waves
5. Tectonic plates outlined on the outside of your model.

Writing

You must explain the following in writing….

1. P waves and S waves
   1. In your own words write up 4-6 sentences explaining P and S waves and how they travel through the Earth’s interior layers? Which type of wave travels all the way through the different layers and which type cannot travel through liquid iron?
2. 3 Differences between Oceanic and Continental crust
   1. List 3 examples of the differences
3. What evidence do scientist have that there are different layers in the Earth?
   1. Answer with 2 pieces of evidence – one must be explaining how P and S waves help determine the different layers.
4. Definition for the physical layers and compositional layers of Earth.
5. Model
   1. Explain how your model is a good model because of how it is similar to an actual Earth.
   2. Explain how your model is not completely accurate because of how it is different from an actual Earth.

**Plate Tectonic Boundaries Model**

Your model/models must include each of the following:

1. 5 types of plate boundaries
   1. Divergent
   2. Transform
   3. Continental- continental convergent
   4. Oceanic-continental convergent
   5. Oceanic-Oceanic convergent

(This does not mean you need 5 models, boundaries could be together on the same model. Still label each part of all boundaries separately.)

1. Label all landforms that could be created by each boundary- Trench, Rift, Mid-Ocean ridge, Volcanic island, Volcano, Mountains, Subduction Zone
2. Label lithosphere and asthenosphere. Should be an obvious difference between lithosphere and asthenosphere.

Writing

You must explain the following in writing….

1. Differences and Similarities
   1. Explain at least 2 differences between the 3 types of plate boundaries
   2. Explain at least 2 similarities between the 3 types of plate boundaries.
2. Earthquakes and Volcanoes
   1. Explain why earthquakes and volcanoes are more common near plate boundaries.
   2. Explain how a person can stay safe before, during and after an Earthquake
   3. Explain how scientists predict Earthquakes.
3. Model
   1. Explain how your model is a good model because of how it is similar to an actual Earth
   2. Explain how your model is not completely accurate because of how it is different from an actual Earth.

**Volcanoes Model**

Your model must include…

1. 3 types of volcanoes with the interior (cut-out of inside)
   1. Shield
   2. Cinder Cone
   3. Composite
2. Label the different characteristics of each volcano

Writing

You must explain in writing….

1. Differences and Similarities
   1. Explain at least 2 differences between the 3 types of volcanoes
   2. Explain at least 2 similarities between the 3 types of volcanoes
2. Why volcanoes are near plate boundaries?
   1. Explain why volcanoes are more common near plate boundaries.
   2. Explain what the ring of fire is and where it is located.
   3. Explain how scientists predict a volcanic eruption.
3. How volcanoes form?
   1. Explain how subduction zones form volcanoes
   2. Explain how mid-ocean ridges form volcanoes
   3. Explain how hot spots form volcanoes.
4. Model
   1. Explain how your model is a good model because of how it is similar to an actual volcano.
   2. Explain how your model is not completely accurate because of how it is different from an actual volcano.

**Volcanic Eruption Demonstration**

You must create a video that demonstrates and discusses the following…

1. The 2 types of volcanic eruptions- quiet and explosive
   1. Explain the differences between the 2 types of eruption. (using vocabulary words mafic, felsic, viscosity, lava, pyroclastic material)
   2. Explain which type of eruption you are demonstrating.
2. Explain which type of volcano you have created (cinder cone, composite or shield)
   1. Explain the different characteristics of the volcano you choose. (shape, type of lava flow, type of eruption –quiet or explosive)
3. A step by step explanation of what you are doing to cause the eruption.
4. Explain how scientists predict a volcanic eruption.
5. Explain how an actual eruption is similar to your demonstration and how it is different.

\*\*You are required to turn in your script or a full page written/ ½ page typed (12 font) explanation explaining the above material.

**Big Ideas Collages**

You must create 3 collages based on…

1. Earth’s Interior
2. Plate Tectonics
3. Earthquakes and Volcanoes

Your collages must include…

1. All the big ideas (from your notebook) on the topic
2. A mixture of pictures, illustrations (hand-drawn), 3-D objects, and text (words or sentences)

\*\*Must be done on poster board (harder type of paper).

- If you use a large poster board you may cut it in ½- which would create 2 collages.