ES104 Video Exercise – Earth Revealed “Restless Planet”

<https://www.learner.org/series/earth-revealed/2-the-restless-planet/>

Watch the video and answer the following review questions. Draw sketches or include digital images where required.

1. True or False: Copernicus was the first scientist to propose that the Sun was the center of our Solar system.
2. What scientific advancement did Galileo contribute to humanity during the renaissance period?
3. Approximately how long ago do scientists estimate as the origin of our solar system?
4. Describe the “nebular hypothesis” theory of the origin of our solar system and our planet.
5. Describe the hypothesis that scientists think explain how planets are created.
6. True or False: as planets increase in distance away from the Sun, surface temperatures increase.
7. True or False: the interior of the Earth is very high temperature, than can cause rocks to melt.
8. Draw a sketch or provide an image of the layered model of the Earth’s interior, label your diagram. Show the four fundamental layers of the Earth from inside, out.
9. What is the source of geothermal energy inside the Earth?
10. Discuss the significance of volcanism with respect to the early stages of Earth history, and the formation of the oceans and atmosphere.
11. What is the essential compound associated with Earth, that is critical for formation of life on the planet as we know it.
12. True or False: most of the early life on the planet was terrestrial.
13. True or False: Mercury and Mars have high amounts of geothermal energy inside them, very similar to planet Earth.
14. Draw and label a sketch or provide an digital image showing the process of mantle convection. List three geologic effects associated with mantle convection.
15. Provide a brief description of the theory of plate tectonics and why it is significant in terms of Earth process.