**Answer key: Natural Processes and Human Activity Study Guide**

**Know the definitions of the following terms: You may use your interactive notebook to study these terms, or you may want to make flashcards,**

* Topographic map: A map that shows the elevation and shape of the land
* Contour line: Imaginary lines that show equal points of elevation
* Contour interval: The difference in elevation between contour lines
* Transform boundary: Plates slide past each other
* Convergent boundary: Plates move toward each other
* Divergent boundary:Plates move away from each other
* Plate tectonics: A theory explaining the structure of the Earth’s crust and many associated phenomena.
* Sediment: rock particles formed from the process of weathering
* Weathering: The breaking down of rock by physical or chemical processes
* Mechanical weathering: The breaking down of rock without changing the chemical composition of the rock
* Chemical weathering: The break down of rock through chemical processes
* Runoff: Water that does not infiltrate into the soil or evaporate moves across land
* Infiltration: Water that seeps into the ground and fills spaces between sediments and rock layers
* Erosion: The movement of rock or sediment from one place to another by wind, water, or ice.
* Deposition: The geologic process in which sediments, rock, or soil are added to landmass or landforms in layers
* Delta: A flat plain of sediment that has been deposited between branches of the mouth of a river in a triangular shape.

**Respond to the following questions please:**

1. Explain the process of transpiration
   1. Liquid water changes to water vapor and is released through the stoma of a plant
2. Explain the formation of clouds.
   1. Water vapor releases energy and condenses to form water droplets. These droplets stick to dust particles in the atmosphere.
3. How much of the Earth is composed of water?
   1. 75%
4. How much of the Earth contains freshwater?
   1. 3%
5. What is the main source of energy that drives that water cycle?
   1. The sun, solar radiation
6. Where is the majority of our freshwater contained?
   1. Glaciers and icecaps
7. What natural phenomena occurs/forms at the following plate boundaries:
   1. Divergent: mid-ocean ridge, rift valleys, formation of new crust
   2. Convergent: mountains, hills, volcanoes, island arcs, subduction zones, deep sea trenches
   3. Transform: fault lines and earthquakes
8. What happens to the age of rocks as you move away from the mid-ocean ridge?
   1. The rocks become older
9. What evidence did Wegener use to support his theory about the supercontinent of Pangea?
   1. Fossils of dinosaurs and plants were found on multiple continents, the continents fit together like puzzle pieces, mountain ranges matched up, evidence of coal formation in antarctica suggests that antarctica’s climate was once warmer so it must have been closer to the equator at one time
10. Where is “new crust” being created?
    1. Mid-ocean ridge (divergent boundaries)
11. At what plate boundary is crust being “destroyed?”
    1. Subduction zones (convergent boundaries)
12. Identify three examples of chemical weathering:
    1. Ex.Groundwater contains carbonic acid and breaks down limestone forming caves
    2. Ex: Acid rain wears away a tombstone making
    3. Ex: Plants release acid from their roots breaking down rock and soil
13. Identify three examples of mechanical weathering:
    1. Ex: Plant roots grown and break down rock
    2. Ex: In a stream, the moving water often knocks rocks against other rocks and sand. Over time, the rocks become smoother and smaller. This process is called **abrasion**
    3. Ex: Water enters the crack of a boulder, freezes and expands.
14. Sediments that spend a long period of time in water tend to be round in shape. Why is this?
    1. In a stream, the moving water often knocks rocks against other rocks and sand. Over time, the rocks become smoother and smaller. This process is called **abrasion**
15. What is the primary factor that is causing sea levels to rise?
    1. Global warming is causing polar ice caps to melt. This is adding freshayer to the ocean causing sea level to rise
16. What are the three main agents involved in chemical weathering?
    1. Water, carbon dioxide, and oxygen
17. What are the three main agents involved in mechanical weathering?
    1. Wind, water, ice, plants , and animals. Wind water and ice are also involved in erosion
18. Compare and contrast continental and oceanic crust.

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| Oceanic | Continental |
| 1. More dense 2. Subducts   3. made of basal 4. Makes ocean floor | 1. less dense 2. Lies beneath continents 3. made of granite |