**APES Study Guide**

**Ecosystems and the Physical Environment**

Vocabulary:

It is necessary that you know the meaning of the following terms in order to answer application and evaluation question on your upcoming assessment. You may write out the definition, make notecards (handwritten or digital), use the online vocabulary resources or simply review the terms in your notes. It is YOUR responsibility to ensure that you know these terms!

Abiotic Albedo Microclimate

Biotic Troposphere Rainshadow

Pool Stratosphere Weather

Sink Coriolis effect Divergent

Ocean acidification Prevailing wind Convergent

Eutrophication Convection Transform fault

Weathering Gyre Subduction

Transpiration ENSO Mass wasting

Run-off Climate Tsunami

Short Answer:

You are REQUIRED to answer each of the following questions on separate paper. ALWAYS write in complete sentences. Use both your class notes AND your textbook for reference.

1. Describe the role of photosynthesis and cellular respiration in the carbon cycle.
2. How does ocean acidification relate to the carbon cycle? What is the major anthropogenic source of carbon that contributes to this problem?
3. Briefly describe each step of the Nitrogen cycle: Nitrogen fixation, Nitrification, Assimilation, Ammonification and Denitrification.
4. How are bacteria significant to the nitrogen cycle?
5. What is the result of excessive fixed nitrogen being put back into the cycle in the form of fertilizers?
6. How does Earth’s atmosphere contribute to producing temperatures on the planet that allow life to be supported?
7. Explain why Earth has seasons and why they are opposite in the Northern and Southern hemispheres.
8. Describe the convective circulation of Earth’s atmosphere from equator to poles.
9. What is El Nino? Where does El Nino occur? What causes El Nino? What conditions does El Nino produce in regions where it occurs?
10. Explain the driving force behind movement of tectonic plates.