Chapter 3

1. Distinguish between atmosphere, troposphere, stratosphere, hydrosphere, geosphere and biosphere. What three interconnected factors sustain life on earth?  What is the greenhouse effect?
2. Define abiotic and biotic. Give an example of each.
3. What is a trophic level? Distinguish between producer (autotroph), consumer (heterotroph), decomposer, detritus feeder (detrivore). Give the formula for photosynthesis.  Define and give examples of the following: primary consumer, secondary consumer, tertiary consumer.
4. What is food chain? Food web? What is biomass? Pyramid of energy flow.
5. Distinguish between gross primary productivity( GPP) and net primary production( NPP)
6. Summarize the hydrological cycle.  Describe the unique properties of water and how it contributes to life.  Summarize the human impact on the water cycle.
7. Summarize the carbon cycle.  Describe a connection between the carbon cycle and the heating of the the Earth’s atmosphere.  Summarize the human impact on the carbon cycle.
8. Summarize the nitrogen cycle.  Describe a connection between plants and the atmosphere that makes nitrogen usable for humans and other consumers.  Summarize the human impact on the nitrogen cycle.
9. Summarize the phosphorus cycle and sulfur cycle.  Summarize the human impact on each. Which cycle does NOT have a gas stage?