APES- Chapter #5- Guided Reading

***The Biogeochemical Cycles***

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_

***Summarize the case study at Lake Washington:***

* What were the issues?
* What caused the issues?
* What were the solutions?

***Define the following:***

* **Biogeochemical Cycles:**
* **Chemical Reactions:**

What is the chemical equation for ***Photosynthesis***?

**Diagram a generalized cycling** of a chemical in an ecosystem below: *(Make sure to label all parts)*

What are the **“big six” of nutrients**?

***Describe a limiting factor*** in the environment:

Define **Tectonic Cycle**:

***Explain*** the Theory of **Plate Tectonics**:

**Define the 3 types of plate boundaries** *(draw a diagram for each)*

* **Divergent Plate:**
* **Convergent Plate:**
* **Transform Fault:**

***What percentage of water*** is available for drinking (human use)? *For example- not trapped underground or in glaciers and not ocean/salty water.*

What is a ***drainage basin*** and why is important to identify?

Summarize the **rock cycle** below ***(draw and label a diagram)***

Explain the ***“missing carbon sink”*** in the carbon cycle

Summarize the **Phosphorus Cycle** *(draw and label a diagram below)*

Read, ***“How Are Human Activities Affecting the Nitrogen Cycle?”*** on pg. 94. *Answer the following questions.*

1: **Compare the rate of human contributions to nitrogen fixation to the natural rate.**

2. How does the change in fertilizer use **relate to the change in world population**? ***Why?***

3: **Develop a diagram** to illustrate the links between the nitrogen and carbon cycles.

4: ***Make a list of ways*** in which human activities could be modified to reduce human contributions to the nitrogen cycle.