Unit 2-Soil Nutrient Cycles Notesheet-

Plant and Soil Science

Name:

1. In what way does nutrient cycling occur at the local level?
2. In what three ways does nutrient cycling occur at the global level?
3. What is the biogeochemical cycle?
4. Fill in each bubble below
5. What is the main entry point into organic living organisms of all nutrients (except oxygen and carbon)?
6. What is detritus?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. How do CO2, H2O, and O2 enter organic systems?
8. Draw arrows to show how oxygen, hydrogen,  
   and carbon cycle between organic and   
     
   inorganic systems:

*Atmosphere*

Plant Cell

1. Phosphorus is crucial for life, but only as a specific  
     
   molecule. What is this molecule? Write the name and   
   chemical formula
2. How is phosphorus lost by leaching replaced in the environment?
3. Nitrogen-fixing bacteria turn N2 in the atmosphere into what molecule?
4. What has replaced lightning as the major inorganic source of nitrogen fixation?
5. Besides commercial fertilizers, what management technique can be used to raise the nitrogen content of soil?
6. What two nitrogen-based molecules are suitable for plants to use for producing amino acids?  
     
   Name: Molecule Name: Molecule
7. Decomposers convert organic nitrogen into what two products that can be used by plants?  
     
   Name: Molecule Name: Molecule
8. When vegetation is removed from an area, what happens to the total nutrient content of that area?
9. How much did the loss of nitrogen increase by? Other nutrients?
10. The loss of nutrients from one area means the of nutrients for another area.
11. Why does water continuously moved from the oceans to dry land?
12. What happens to 60% of the water that falls as precipitation?
13. What happens to the remaining 40% of precipitation?
14. Where would we find most of the earth’s carbon?
15. Of the carbon that is a part of the biosphere, where is most found?
16. How much of the earth’s biospheric carbon is found in vegetation?
17. Where is the vast majority of the exchangeable nitrogen on earth found?
18. Why is the amount of nitrogen leaving the atmosphere outweighed by the nitrogen entering the atmosphere?

1.   
  
2.