**ICES Worksheet**

**Ecosystems**

Using your ICES disk – Click on “Start” and go to Chapter 4

Chapter 4: Ecosystems: Components, Energy Flow, and Matter Cycling

* READ each section summary (4-1 through 4-8)
* You are responsible for **all** vocabulary terms so if you don’t know what something means LOOK IT UP! You can use the glossary function. \*(Also - see the upper right menu for an on-line link to “flash cards” for the chapter….printable vocabulary)
* Answer these questions using the interactive figures at the top of the page (where the hands are).

1. Describe each of the levels of organization.
2. Define each cell part.
3. Become familiar with this diagram.
   1. How much solar energy is reflected back into space?
   2. Which layer of the atmosphere is closest to Earth?
4. What is aerobic respiration?
   1. What are the products of aerobic respiration?
5. What eventually happens to all energy that enters the system?
6. Describe the role of organisms in an ecosystem.
7. At what times of the year is the diet of a Red Fox based largely on fruits and insects?
8. Describe the differences between a grazing food web and a detrital food web.
9. Describe the steps in the transfer flow of energy in the Silver Springs ecosystem.
10. Hydrologic (Water) Cycle – Identify each stage of the cycle and the approximate amounts of water (include units) at each stage of the cycle.
11. Draw the Carbon Cycle noting all of the carbon sinks (reservoirs) and actions relating to each.
12. Define all of the processes of the Nitrogen Cycle.
13. Phosphorous Cycle – Identify the main reservoirs for this cycle and note how phosphorous moves through the cycle.
    1. How are land and water portions of the cycle different?
14. Sulfur Cycle – describe the steps of this cycle.