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

**8th grade - Chapter 12 Study Guide: Matter and Energy in the Environment**

Terms to Know: transpiration, law of conservation of energy, carbon cycle, nitrogen cycle, water cycle, oxygen cycle, food web (how do you read it), energy pyramid, and trophic levels (who belongs where).

1. Know how to identify living and nonliving (biotic and abiotic factors) in an environment.

2. **3** % of the Earth’s water is not in the oceans.

3. Know the difference between the following:

a. carnivore – eat only meat

b. omnivore – eat meat and plants

c. herbivore – eat only plants

d. detritivore – eat dead things (also known as decomposers)

4. The three main parts of the water cycle are evaporation, condensation, and precipitation.

5. Photosynthesis does NOT use chemical energy to make food. It uses carbon dioxide, light energy, and water

6. Energy that is not used for life processes is lost as heat (thermal energy).

7. Most food chains begin with energy coming from the Sun.

8. Chemosynthetic bacteria use the chemical energy in inorganic compounds in hot water and produce food via chemosynthesis. They do NOT use light energy to make food.

9. After animals eat plants in the nitrogen cycle, they pass waste that decays and returns nitrogen to the soil.

10. What happens to energy as you move upward from level to level? It decreases.

11. Decomposition can release carbon into the soil and air.

12. What are three main things that bacteria do to help out in the nitrogen cycle?

* changing nitrogen compounds into atmospheric nitrogen
* nitrogen fixation
* breaking down the tissue of dead organisms

13. How much of the oxygen in Earth’s atmosphere do phytoplankton release? 50%