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

**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. \_\_\_\_\_\_\_\_\_\_\_\_ % of the Earth’s water is not in the oceans.

3. Know the difference between the following:

a. carnivore –

b. omnivore -

c. herbivore –

d. detritivore -

4. What are the three main parts of the water cycle? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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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 \_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_ (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, they \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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10. What happens to energy as you move upward from level to level? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ can release carbon into the soil and air.

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

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