Name _____ Date _____ Period _____

Ecology Study Guide

1. Energy in an ecosystem is captured by producers during the process of photosynthesis. Explain what **percent of energy** is transferred from one trophic level to another and the <u>three</u> ways the energy is lost and/or used within the trophic level.

2. List and define the **five levels of organization** in Ecology.

3. Explain the role of a **producer** and a **decomposer**, and how they cycle **biotic** and **abiotic** matter through the ecosystem.

4. A habitat is where an organism lives, the niche is the job that it performs; explain what happens when a **non-native species** is introduced into an environment where a **native** species already occupies the **niche**.

5. What is **symbiosis**, and what are the <u>three</u> different types of symbiosis.

6. What group of organisms is responsible for running the **nitrogen cycle**?

7. How is **carbon** stored in the **biosphere**?

8. What are the <u>two</u> main human activities that disrupt the **carbon cycle**?

9. Explain how **carbon** is <u>cycled</u> between **photosynthesis** and **cellular respiration**.

10. What is the **greenhouse effect**, and how is the burning of fossil fuels affecting related to this concept?

11. Differentiate between **primary** and **secondary succession**.

12. List the main distinguishing characteristic of the following biomes: **tundra**, **tropical rainforest**, **temperate deciduous forest**

13. Define the following terms; **birth rate**, **death rate**, **immigration**, **emigration**, **carrying capacity**, **exponential growth**

14. Differentiate between a **density-dependent factor** and a **density-independent factor**.

15. What is **biological magnification** and how is **DDT** related to this concept?

16. What is **climate** and what characteristic of the earth forms the different climate zones.

17. Explain how **urbanization** affects the **water cycle**.

18. What is the **pH** of **normal rainfall**?

19. Draw a simple **food cha**in and <u>label</u> each **trophic level**.

20. What is the difference between **renewable** and **nonrenewable resources**? Give <u>examples</u> of each.