**Ecology Unit Review**

**True/False**

T / F 1. Abiotic substances are living things.

T / F 2. A **carnivore** is a consumer.

T / F 3. An artificial ecosystem has more biodiversity than a natural ecosystem

T / F 4. Bacteria in the soil allow plants to obtain their nitrogen supply

T / F 5. The **maximum** number of organisms that an ecosystem can support without harming itself is called the carrying capacity.

# Multiple Choice

7. Interconnecting food chains are called:

 a) food pyramids

 b) food webs

 c) food biomass

 d) food nutrient cycles

 e) a food biome

8. All energy originates form

 a) omnivores d) producers

 b) consumers e) the sun

 c) herbivores

**Short Answer**

9. Define the word sustainability.

10. Describe 3 differences between a natural and artificial ecosystem. What human activities keep an artificial ecosystem the way it is?



11. Use the picture of the ecosystem to identify 3 abiotic and 3 biotic components

12. What is biodiversity? Why is more biodiversity better?

13. Explain what happens to the amount of energy when food is transferred to different trophic levels?



14. Use the food web to identify a:

a) consumer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) producer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) carnivore \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d) omnivore \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) herbivore\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15. If the rabbit population got a disease and many died, how would that affect the rest of the food chain?

16. Fill in the chart below

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Reactants (starting materials) | Products (what is produced) | Purpose | Done by plants, animals or both? |
| Photosynthesis |  |  |  |  |
| Cell Respiration |  |  |  |  |



17. a) Fill in the diagram below with the water cycle

b) Define the words:

* Transpiration:
* Condensation:
* Evaporation:

18. a) List the 4 places that carbon is stored.

b) What are 2 ways humans are impacting the carbon cycle?

19. a) How do we get our source of nitrogen?

b) What happens when too much nitrogen is added to soil?

20. What is carrying capacity? Identify the carrying capacity for the population on the graph.

21. Fill in the table about the factors that affect population size

|  |  |  |
| --- | --- | --- |
|  | Density-Dependent | Density-Independent |
| Definition |  |  |
| At least 3 examples |  |  |

22. Calculate the **population growth** in the following ecosystem:

Births = 23 deaths = 27

Immigration = 5 emigration = 12

23. Discuss 2 ways that humans are threatening biodiversity. (ex: draining wetlands, deforestation, invasive species, extinction) Why is it difficult to prevent this? What can be done to improve the situation?

24. Discuss Sustainability. Give examples of how humans are not being sustainable. Give examples of how humans are attempting to create sustainability.