Evaluate: Ecology 1

INSTRUCTOR:

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Instructions: Answer the following questions to demonstrate your understanding of ecosystems, energy flow, and natural cycles.

Part 1: Matching Vocabulary

Match the vocabulary term to the correct definition by writing the appropriate term in the blank.

Definit	ions:	
1.	Th	e process plants use to make food using sunlight
2.	An	organism that breaks down dead matter
3.	The	e role an organism plays in its environment
4.	A	iving part of an ecosystem
5.	A r	on-living part of an ecosystem
6.	The	e movement of water through evaporation, condensation, and precipitation

- 7. _____ A diagram showing how energy moves from one organism to another
 8. _____ The movement of carbon between land, air, and water through processes like respiration and photosynthesis
- 9. _____ An organism that eats other organisms for energy
- 10. _____ The process where bacteria help convert nitrogen in the atmosphere into a form plants can use

Vocabulary Terms (Scrambled Order):

- A. Water Cycle

 B. Niche

 F. Producer

 J. Decomposer

 C. Biotic Factor

 G. Abiotic Factor
- D. Consumer H. Carbon Cycle

Part 2: Multiple Choice

Circle the correct answer.

11. Which of the following is a biotic factor in an ecosystem?

a) Sunlight

c) Trees

b) Soil

d) Water

12. What is the primary source of energy for most ecosystems?

a) Decomposers

c) Herbivores

b) The Sun

d) Water

13. Which of the following organisms is a decomposer?

a) Grass

c) Mushroom

b) Wolf

d) Eagle

14. In a food chain, which of the following best represents the flow of energy?

a) Rabbit \rightarrow Grass \rightarrow Hawk

c) Hawk \rightarrow Rabbit \rightarrow Grass

b) Sun \rightarrow Grass \rightarrow Rabbit \rightarrow Hawk

d) Sun \rightarrow Hawk \rightarrow Grass \rightarrow Rabbit

15. How does the nitrogen cycle benefit plants?

a) It provides oxygen for respiration

more efficiently

b) It supplies nitrogen compounds that plants need to grow

d) It prevents carbon from being released into the atmosphere

c) It allows plants to absorb sunlight

Part 3: Short Answer

16. Interpreting Data

The table below shows the number of deer in a forest over a 10-year period along with the average annual rainfall:

Year	Deer Population	Rainfall (inches)
2015	120	35
2016	135	40
2017	150	45
2018	160	42
2019	140	38
2020	125	30
2021	110	28
2022	95	25
2023	85	22
2024	75	20

Name:	Date:				
Question: Based on the data, describe the relationship between rainfall and the deer population.					
Why do you think the population changed over time?					
17. Explanation Question					
Explain how the carbon cycle supports life on Earth. In your response,	describe at least two				
processes that move carbon between the atmosphere, land, and wat	er.				