Worksheet: The Flow of Energy and Matter in an Ecosystem

Part A: Fill in the Blank

Word Bank:

producers consumers decomposers energy matter
food chain food web photosynthesis nutrients sun

1. The primary source of energy for most ecosystems is the _____.
2. Plants make their own food through a process called _____.
3. Organisms that make their own food are called _____.
4. Animals that eat other organisms are called _____.
5. Organisms such as fungi and bacteria that break down dead organisms are called _____.
6. A series of organisms through which energy passes is called a _____.
7. Interconnected food chains form a _____.
8. _____ flows through an ecosystem and is eventually lost as heat.
9. _____ is recycled through ecosystems.
10. Decomposers return _____ to the soil.

Part B: Multiple Choice

11. Which organism is a producer?
    a. Hawk
    b. Grass
    c. Snake
    d. Rabbit

12. What do herbivores eat?
    a. Plants
    b. Animals
    c. Both plants and animals
    d. Fungi

13. Which group recycles matter in an ecosystem?
    a. Producers
    b. Consumers
    c. Decomposers
    d. Carnivores

14. In a food chain, energy moves from:
    a. Consumers to the sun
    b. Plants to the sun
    c. The sun to producers & then to consumers
    d. Decomposers to producers

15. Which statement is true?
    a. Energy is recycled.
    b. Matter is lost as heat.
    c. Matter cycles through ecosystems.
    d. Producers eat consumers.

16. A rabbit that eats grass is a:
    a. Producer
    b. Herbivore
    c. Decomposer
    d. Carnivore

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17. Which organism would likely be at the top of a food chain?
    a. Grass
    b. Mouse
    c. Hawk
    d. Mushroom

18. Food webs show:
    a. One pathway of energy flow
    b. Multiple feeding relationships
    c. Only producers
    d. Only consumers

19. During photosynthesis, plants use:
    a. Sunlight, water, and carbon dioxide
    b. Oxygen and soil
    c. Animals and sunlight
    d. Water and oxygen only

20. Most energy is lost as:
    a. Water
    b. Nutrients
    c. Heat
    d. Soil

Part C: Matching

Match each term with the correct definition.

Term	Definition
21. Producer	A. Organism that breaks down dead matter
22. Consumer	B. Network of interconnected food chains
23. Decomposer	C. Organism that makes its own food
24. Food Chain	D. Organism that gets energy by eating others
25. Food Web	E. Pathway showing energy transfer

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