

Test: Energy Transfer in a Food Chain

Part A: True or False

Directions: Write **T** or **F**

1. ____ Producers obtain their energy directly from the Sun.
 2. ____ Energy increases as it moves up a food chain.
 3. ____ Consumers must obtain energy by eating other organisms.
 4. ____ Decomposers help recycle nutrients back into the ecosystem.
 5. ____ A food chain shows the movement of energy through organisms.
 6. ____ Plants are considered primary consumers.
 7. ____ Most energy is lost as heat at each trophic level.
 8. ____ Herbivores eat producers.
 9. ____ Energy is recycled in ecosystems over and over again.
 10. ____ The Sun is the main source of energy for most food chains.
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Part B: Multiple Choice: Directions: Circle the best answer.

11. What is the original source of energy for most food chains?
 - A. Water
 - B. Soil
 - C. The Sun
 - D. Air
12. Which organism is a producer?
 - A. Rabbit
 - B. Grass
 - C. Hawk
 - D. Snake
13. What is a primary consumer?
 - A. An organism that eats producers
 - B. An organism that makes its own food
 - C. An organism that eats other consumers
 - D. An organism that breaks down dead matter

14. Which of the following is a secondary consumer?
- A. Grass
 - B. Deer
 - C. Frog
 - D. Tree
15. Why does less energy reach higher levels of a food chain?
- A. Energy is destroyed.
 - B. Organisms use energy for life processes.
 - C. Producers take all the energy.
 - D. Consumers do not need energy.
16. Which organism would most likely be a tertiary consumer?
- A. Grass
 - B. Grasshopper
 - C. Frog
 - D. Hawk
17. Approximately what percentage of energy is transferred to the next trophic level?
- A. 1%
 - B. 10%
 - C. 50%
 - D. 100%
18. Which organism acts as a decomposer?
- A. Mushroom
 - B. Rabbit
 - C. Hawk
 - D. Grass
19. In the food chain Grass → Rabbit → Fox, the rabbit is a:
- A. Producer
 - B. Secondary Consumer
 - C. Primary Consumer
 - D. Decomposer
20. What happens to most of the energy that is not transferred?
- A. It is stored forever.
 - B. It becomes sunlight.
 - C. It is lost as heat.
 - D. It disappears completely.
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Part C: Matching: Directions: Match the term in Column A with the correct answer in Column B.

Column A

- 21. ____ Producer
 - 22. ____ Primary Consumer
 - 23. ____ Secondary Consumer
 - 24. ____ Decomposer
 - 25. ____ Food Chain
 - 26. ____ Tertiary Consumer
 - 27. ____ Energy Pyramid
 - 28. ____ Herbivore
 - 29. ____ Carnivore
 - 30. ____ Sun
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Column B

- A. Organism that eats only plants
- B. Main source of energy for most ecosystems
- C. Organism that breaks down dead organisms
- D. Organism that eats a primary consumer
- E. Diagram showing how much energy is available at each level
- F. Organism that makes its own food
- G. Sequence showing the flow of energy through organisms
- H. Organism that eats a secondary consumer
- I. Organism that eats only animals
- J. Organism that eats producers