

Energy Flow in Ecosystems

Part A: Vocabulary Matching

Match each term with the correct definition. Write the letter of the correct answer on the line.

Terms	Definitions
1. ____ Producer	A. An organism that breaks down dead organisms and waste
2. ____ Consumer	B. A diagram showing multiple interconnected food chains
3. ____ Decomposer	C. An organism that eats plants or other producers
4. ____ Food Chain	D. The process plants use to convert light energy into chemical energy
5. ____ Food Web	E. An organism that makes its own food
6. ____ Energy Pyramid	F. An organism that eats other organisms for energy
7. ____ Photosynthesis	G. A diagram showing the transfer of energy from one organism to another
8. ____ Trophic Level	H. A level in a food chain or food web
9. ____ Herbivore	I. An organism that mainly eats plants
10. ____ Carnivore	J. A diagram that shows the amount of energy available at each trophic level

Part B: Multiple Choice

- What is the main source of energy for most ecosystems?
 - Water
 - Soil
 - The Sun
 - Decomposers
- Which organisms are usually found at the first trophic level?
 - Carnivores
 - Producers
 - Herbivores
 - Decomposers
- Which organism is a producer?
 - Grass
 - Rabbit
 - Hawk
 - Mushroom
- What happens to energy as it moves from one trophic level to the next?
 - It increases
 - It stays exactly the same
 - Most of it is lost as heat
 - It disappears completely
- Which organism is most likely to be a primary consumer?
 - Grass
 - Rabbit
 - Snake
 - Hawk

16. Which sequence correctly shows the flow of energy?
A. Hawk → snake → grass → Sun
B. Sun → grass → rabbit → hawk
C. Rabbit → grass → Sun → hawk
D. Grass → Sun → hawk → rabbit
17. Why are producers important in an ecosystem?
A. They consume all the animals.
B. They create energy from nothing.
C. They convert light energy into chemical energy stored in food.
D. They prevent decomposers from working.
18. Which organism would most likely be a secondary consumer?
A. Grass
B. Grasshopper
C. Frog that eats grasshoppers
D. Algae
19. What is the role of decomposers?
A. They make sunlight.
B. They break down dead organisms and recycle nutrients.
C. They only eat producers.
D. They produce oxygen from animals.
20. Which statement about energy flow is correct?
A. Energy cycles endlessly through an ecosystem.
B. Energy generally flows from the Sun to producers and then to consumers.
C. Consumers create most of the energy in an ecosystem.
D. Energy increases at higher trophic levels.

Part C: Complete the Food Chains

Word Bank:					
Sun	grass	grasshopper	frog	snake	hawk
	Algae	small fish	large fish	bacteria	

21. _____ → grass → rabbit → fox
22. Sun → _____ → frog → snake → hawk
23. Sun → algae → _____ → large fish
24. Sun → grass → grasshopper → _____ → snake
25. Sun → grass → rabbit → _____

Part D: Identify the Trophic Level

Producer, Primary Consumer, Secondary Consumer, or Tertiary Consumer.

26. Grass: _____
27. Rabbit: _____
28. Frog that eats insects: _____
29. Hawk that eats snakes: _____
30. Algae: _____
31. Grasshopper: _____
32. Snake that eats frogs: _____

Part E: Energy Pyramid

Answer the questions about energy pyramids.

33. Which trophic level contains the greatest amount of energy?

-
34. Which trophic level contains the least amount of energy?

-
35. About what percentage of energy is typically transferred from one trophic level to the next?

-
36. What happens to most of the energy that is not transferred to the next trophic level?

-
37. Why are there usually fewer organisms at higher trophic levels?
-

38. If producers have 10,000 units of energy, approximately how much energy would be available to primary consumers?
