

Metabolism Review

1. What are the three elements that build carbohydrates?
2. What do you call carbohydrates that have multiple glucose molecules linked together?
3. Which group of polysaccharides do animals make?
4. Which groups of polysaccharides do plants make?
5. What is the molecular formula of glucose?
6. Which carbohydrate do plants store for later energy use?
7. Which carbohydrate do organisms use for quick energy?
8. Which carbohydrate do animals store for later energy use?
9. Which carbohydrate makes up the cell walls of plants?
10. Where does the energy of food originally come from?
11. What is the name of ATP?
12. How many phosphates are in a molecule of ADP?
13. What happens when phosphates are broken off of ATP?
14. What is ATP's role in the cell?
15. Where does the energy that is stored in ATP come from?
16. What type of organisms carry out photosynthesis?
17. In which eukaryotic organelle does photosynthesis occur?
18. What is the initial source of energy for photosynthesis?
19. What is the name of light-capturing pigment used for photosynthesis?
20. Write the overall equation for photosynthesis using words.
21. Write the overall equation for photosynthesis using chemical formulas.
22. What are the reactants in photosynthesis?
23. What are the products in photosynthesis?
24. In addition to carbon dioxide and water, what is required for photosynthesis?

25. Photosynthesis is the process in which sun's energy is trapped in the chemical bonds of sugar.
- Requires _____, _____, and _____.
 - Makes _____ (_____) which is used as food in the plant.
 - Waste product produced is _____.
26. For each of the following scenarios, decide what will happen to the rate of photosynthesis (increase or decrease).
- The amount of carbon dioxide is decreased in the environment.
 - The amount of available sunlight is decreased.
 - The amount of water available to the plant is increased.
 - The amount of chlorophyll is increased in the leaves.
27. Which type of organisms carry out cellular respiration?
28. What are the two types of cellular respiration?
29. In which eukaryotic organelle does aerobic cellular respiration occur?
30. What is the initial energy source used for cellular respiration?
31. Write the equation for cellular respiration in words:
32. Write the overall equation for cellular respiration using chemical symbols.
33. What are the reactants of aerobic cellular respiration?
34. What are the products of aerobic cellular respiration?
35. What does anaerobic mean? How many molecules of ATP are produced in anaerobic respiration?
36. What does aerobic mean? How many molecules of ATP are produced in aerobic respiration?
37. What is another word for "anaerobic"?
38. What product do animal cells make during anaerobic respiration?
39. What product do yeast and some bacterial cells make during anaerobic respiration?
40. What would happen to a cell that stopped doing cellular respiration?