

Photosynthesis and cellular respiration review answers

[Health & Medicine](#), [Cellular Respiration](#)



What is the equation for photosynthesis? $6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$ 6. What are suspended in the fluid stroma of chloroplasts? Stacks of thylakoids called grana 7. _Photosynthesis/Calvin Pathway_ is a series of linked chemical reactions from which energy from the sun is converted into chemical energy in the form of organic compounds. 8. What is the purpose of chlorophyll? Absorb light energy Why is it green? Green color reflected 9. What can happen to light when it strikes an object? Reflected, Absorbed, and Transmitted 10. What happens when chlorophyll absorbs light?

Electrons are raised to a higher energy level 11. Where do the electrons from a chlorophyll molecule go when they move to a higher energy level? Electron transport chain 12. Electrons found in photosynthesis are eventually replaced by electrons from _photosystem II_. 13. Where does the oxygen come from that is produced in photosynthesis? Water 14. What is the major gas byproduct of photosynthesis? Oxygen 15. Photosynthesis occurs in the thylakoid membrane and converts light energy into chemical energy. 16. What process provides the energy to produce ATP molecules? Photosynthesis 17.

Thylakoid membrane is where electrons return to their original energy levels. 8. Calvin Cycle creates the carbohydrates needed for energy and growth in photosynthesis. What other organic molecules are produced? Proteins and Lipids 19. Name the two products of the light reaction in photosynthesis that provide energy for the Calvin Cycle. ATP and NADPH 20. What does the Calvin Cycle require? ATP and NADPH Can it occur in light and dark conditions? Yes

What does the Calvin Cycle generate? Glucose 21 . Where does the TAP for the Calvin Cycle come from for the production of carbohydrate molecules?

Light Reactions of photosynthesis 22. Where do all the carbon atoms in organic lessees ultimately come from? Carbon Dioxide from the atmosphere

23. Why is TAP important? Essential for all tasks necessary for cell's life 24.

What gas is produced in photosynthesis necessary for cellular respiration?

Oxygen 25. What is the equation for cellular respiration? $C_6H_{12}O_6 + 6O_2$

$CH_2O + 6H_2O + \text{energy (TAP)}$ 26. What process breaks down food molecules to

release stored energy? Cellular Respiration 27. What occurs during

glycolysis? Molecule of glucose is split, two molecules of Pyruvic Acid are made, and 2 Tap's are produced.

Is glycolysis an aerobic or anaerobic reaction? Anaerobic 28. What is the process that takes place when organic compounds are broken down

anaerobic (without oxygen)? Fermentation 29. What is produced in muscles when you exercise vigorously in the absence of necessary oxygen? Lactic

Acid 30. Name the three stages of cellular respiration. Glycolysis, Krebs (Citric Acid) Cycle, and Electron Transport Chain What are the two main

stages for cellular respiration? Glycolysis and Aerobic Respiration Which

stage produces the most energy? Electron Transport Chain 31 NADH, CA, and FADH are formed during the Krebs Cycle. 32.

What two aerobic stages in cellular respiration reduce most of the TAP

needed for life, break down glucose into Carbon Dioxide, water, and TAP?

Krebs Cycle and Electron Transport Chain 33. What are the end products of

the electron transport chain in cellular respiration? Water and Tap's 34.

Electrons combine with oxygen and protons to form water at the end of the electron transport chain . 35. When living cells break down molecules, what

is the form of energy stored and energy released Stored as TAP and heat is

released 36. What two molecules donate the electrons for the electron

transport chain? FADDY and NADIA and H₂O