



Across

2. Five carbon compound that combines with CO₂ in the Calvin cycle to make glucose
4. Red, orange, and yellow pigments
6. C₆H₁₂O₆
8. Fluid surrounding the thylakoids in chloroplasts
11. Stacks of thylakoids
13. Color of light reflected by chlorophyll
14. Incorporating the carbon from CO₂ into organic compounds such as carbohydrates
16. Membrane protein where water is split when light energy is absorbed.
17. Process where light energy is absorbed from the sun and converted into ATP and NADPH
19. Organism that uses sunlight to change inorganic substances into organic compounds
20. Synthesis of ATP during the light reactions
23. Complex series of chemical reactions in which the products of one reaction are the reactants for the next.
25. Energy carrier made during photosynthesis
26. Clusters of pigment molecules found in the thylakoid membranes of chloroplast. They are a type of protein

Down

1. Flattened sacs in the chloroplasts that contain chlorophyll
3. Process used by autotrophs to make carbohydrates
5. Series of electron acceptors in the thylakoid membrane that removes energy from excited electrons to produce ATP.
7. Animals and fungi that must depend on autotrophs for their food energy
9. Process where organic compounds such as glucose are formed by using CO₂, ATP, and NADPH
10. Substances in plastids, (chloroplasts) that absorb various wavelengths of light
12. Supplies all the energy directly or indirectly for life on earth
15. Pathway used by pineapples and cacti to make sugars
18. Organelle where photosynthesis occurs
21. Openings on the underside of leaves for gas exchange
22. Environmental factor that can affect the rate of photosynthesis
24. Electrons released when this substance splits replaces electrons lost from chlorophyll

Word Bank

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|----------------|--------------------------|-----------------------------|-------------|
| Chloroplast | Chlorophyll | Pigments | Carotenoids |
| Photosynthesis | Sunlight | Stomata | Stroma |
| Photosystem 2 | CAM | Temperature | Glucose |
| Heterotroph | Thylakoids | Water | Grana |
| Calvin Cycle | Electron Transport Chain | RuBP (ribulose biphosphate) | Autotrophs |
| Green | Carbon fixation | Light reaction | Photosystem |
| Chemosmosis | NADPH | Biochemical Pathway | |