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Photosynthesis & Cellular Respiration crossword

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| **Across**  **3.** anaerobic process by which ATP is produced by glycolysis  **5.** light-absorbing pigment molecule in photosynthetic organisms  **7.** adenosine diphosphate; low-energy molecule that can be converted into ATP  **11.** process during cellular respiration that breaks down a carbon molecule to produce molecules that are used in the electron transport chain  **12.** process by which ATP is synthesized by using chemicals as an energy source instead of light  **13.** product of fermentation in many types of cells, including human muscle cells  **19.** part of photosynthesis that absorbs energy from sunlight and transfers energy to the light-independent reaction | **Down**  **1.** process of producing ATP by breaking down carbon-based molecules when oxygen is present  **2.** part of photosynthesis that uses energy absorbed during the light-dependent reactions to synthesize carbohydrates  **4.** series of proteins in the thylakoid and mitochondrial membranes that aid in converting ADP to ATP by transferring electrons  **6.** process by which light energy is converted to chemical energy; produces sugar and oxygen from carbon dioxide and water  **8.** process by which a photosynthetic organism uses energy to synthesize simple sugars from carbon dioxide  **9.** anaerobic process in which glucose is broken down into two molecules of pyruvate and two net ATP are produced  **10.** membrane-bound structure within chloroplasts that contains chlorophyll  **14.** process that does not require oxygen to occur  **15.** enzyme that catalyzes the reaction that adds a high-energy phosphate group to ADP to form ATP  **16.** adenosine triphosphate; high-energy molecule that contains, within its bonds, energy that cells can use  **17.** series of light-absorbing pigments and proteins that capture and transfer energy in the thylakoid membrane  **18.** process that requires oxygen to occur |