Cellular Respiration and Photosynthesis Crossword Puzzle

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|  |  |  |  |  |  |  | 3  A |  | E |  |  |  |  |  |  |  |  |  | 4  P |  | E |  |  |  |  |  |  |  |  |
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|  |  |  |  | 7  A | U | T | O | T | R | O | P | H |  | E |  |  | 8  W |  | T |  | B |  |  |  | E |  |  |  |  |
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| **Across**  **7.** An organism that is able to capture energy from sunlight and transform it into an organic molecule of glucose  **10.** site of glycolysis  **11.** site of aerobic cellular respiration  **13.** reactant that is broken down in first stage (glycolysis) into pyruvate  **15.** molecule that transfers electrons Calvin cycle to build glucose  **16.** adenosine triphosphate the "energy currency of the cell" the form of energy that is useable by cells breaks into ADP when used by cells  **17.** adenosine diphosphate accepts a phosphate group to store energy in the form of ATP  **18.** molecule that brings electrons and H via FADH2 to the electron transport chain to create ATP created during reactions that breakdown glucose  **19.** anaerobic respiration follows glycolysis and converts pyruvate into either alcohol and CO2 (yeast, bacteria) or lactic acid (muscles) occurs in the cytoplasm  **20.** Plants | **Down**  **1.** metabolic pathway that does not use oxygen (AKA fermentation); breakdown of pyruvate into lactic acid or alcohol and CO2  **2.** An organism that obtains organic food molecules by eating other organisms  **3.** metabolic pathway that requires oxygen (Kreb's --> ETC); complete breakdown of glucose and oxygen into carbon dioxide and water  **4.** 6CO2 + 6H2O + ENERGY --> C6H12O6 + 6O2  **5.** NADH and FADH2 deliver electrons that are passed across the membrane to create 32 ATP  **6.** ALL organisms MUST perform some type of respiration (aerobic or anaerobic) to convert glucose into ATP  **8.** product created from oxygen and electrons from ETC  **9.** The molecules created from the initial breakdown of glucose during glycolysis  **12.**  reactant that is used to accept electrons in ETC  **14.** the site of photosynthesis |

   pyruvate       cytoplasm       aerobic cellular respiration       anaerobic cellular respiration       ATP       ADP       mitochondrion       glucose in respiration       fermentation       oxygen in respiration       water in respiration       photosynthesis equation       NADP+       chloroplast       autotroph       heterotroph       photosynthetic organisms       respiration organisms       electron transport chain        FAD