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Bioenergetics

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| **Across**  **4.** Cellular respiration that requires oxygen  **6.** Plant pigment responsible for red, orange, and yellow colors  **9.** Anaerobic respiration performed by yeast cells  **10.** A natural compound that gives color to plants and animals  **15.** Anaerobic stage during cellular respiration that occurs in the cytoplasm  **16.** Area of the chloroplast where the Calvin Cycle takes place  **18.** Pores on the underside of a leaf  **19.** Sequence of biochemical reactions, catalyzed by enzymes, that occur in all living cells and concerned mainly with the exchange of energy  **22.** Chemical reactions in which glucose is converted into ATP in the mitochondria  **24.** The process of converting carbon dioxide from the atmosphere into carbohydrates, like glucose, by photosynthesis  **25.** The molecule glucose is converted to during glycolysis  **26.** Membrane bound organelle where cellular respiration takes place  **27.** Second stage of cellular respiration that requires only 2 ATP  **28.** Process that does not require oxygen to occur  **29.** Any pigment in plant leaves other than chlorophyll  **30.** First phase of photosynthesis that occurs in the thylakoid membranes | **Down**  **1.** Process that uses chemical energy, instead of light energy, to make the energy storing molecule of glucose  **2.** Enzyme that adds a phosphate group to ADP to make ATP  **3.** Third stage of cellular respiration when most ATP molecules are produced  **5.** Anaerobic respiration performed by bacteria and muscle cells  **7.** Site where oxygen in produced in the chloroplast  **8.** The mechanism in plants by which chlorophyll and other light-absorbing pigments absorb energy from sunlight  **11.** Membrane bound organelle where photosynthesis occurs  **12.** Another name for anaerobic respiration  **13.** Reactions that convert light energy into chemical energy  **14.** Another name for the Krebs cycle  **17.** Form of cellular energy synthesized in the mitochondria  **20.** Second phase of photosynthesis  **21.** Movement of hydrogen ions across a semipermeable membrane during cellular respiration or photosynthesis to generate ATP  **23.** A lower energy molecule that can be converted to ATP by adding a phosphate group |