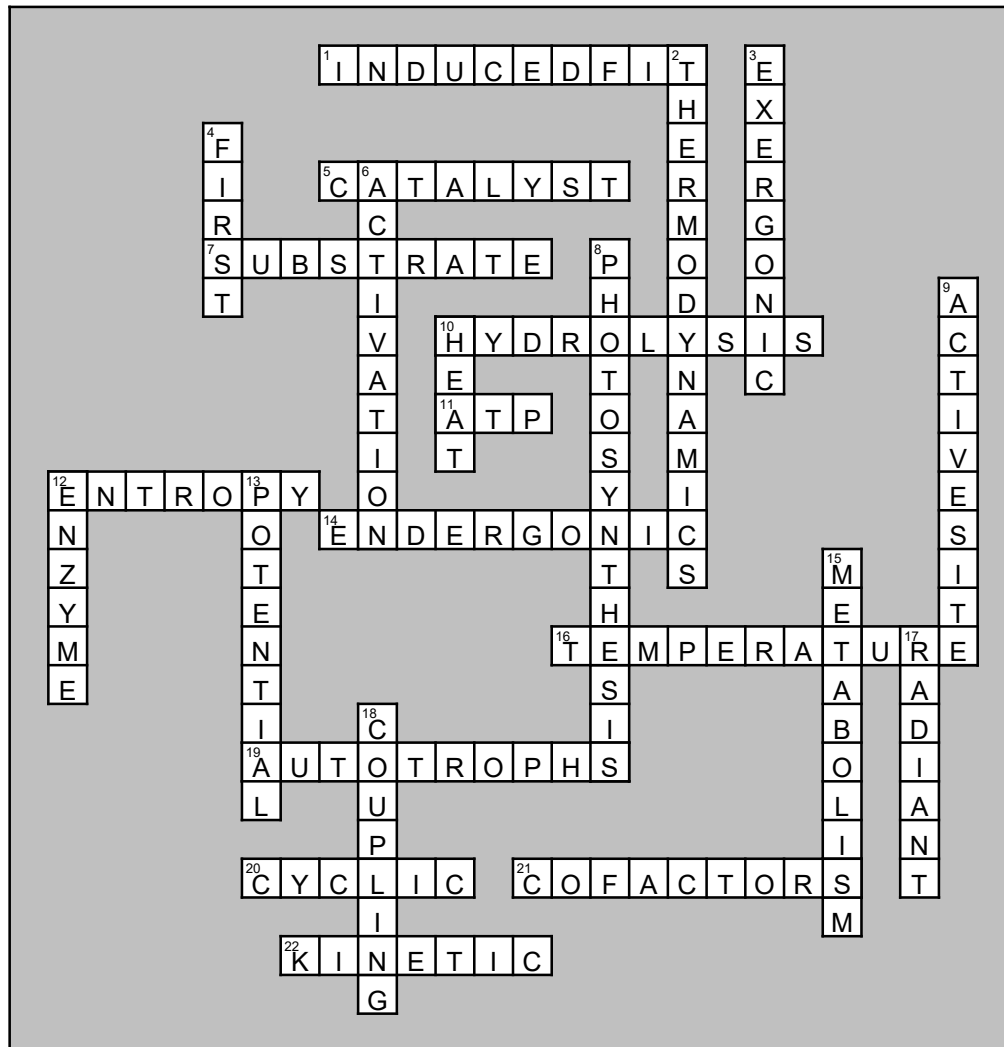


Crossword



Across

- Theory that shows how substrates join to the active site of an enzyme (shape can vary).
- Enzymes act as a ____, speeding up reactions by lowering activation energy.
- The specific reactant that an enzyme acts on.
- ATP releases energy by transferring a phosphate to another molecule by the addition of water.
- Adenine base, ribose sugar, 3 phosphate tail.
- Second law of thermodynamics in which there is an increase in disorder in the universe unless outside energy is added.
- Reaction in which energy is required to drive photosynthesis.
- Two factors that regulate enzyme function are pH and ____.
- Make their own food: plants, some protists, some bacteria.
- Energy is ____. Photosynthesis is basically the reverse of cellular respiration.
- Necessary for many enzymes to function properly. Includes coenzymes.
- Energy of motion so work can be done.

Down

- Study of energy transformations that occur in and between living organisms.
- Reaction in which energy is produced as in cellular respiration.
- Law of thermodynamics in which energy is transferred or transformed.
- Energy that is a barrier for any reactions to begin.
- Uses energy poor reactants (CO₂ and water), absorbed sunlight, produces energy rich sugars.
- A substrate must fit into the enzyme's ____ in order to work. This is highly specific.
- Energy that flows from warmer to cooler.
- Speed up a cell's chemical reactions by lowering energy barriers. Usually proteins.
- Energy stored in chemical bonds and concentration gradients.
- The sum total of all chemical reactions in an organism. Builds up complex molecules or breaks them down into simpler compounds.
- Energy of light in which photons are absorbed to power photosynthesis.
- Energy ____ is when reactions work together. Exergonic reactions drive endergonic reactions.