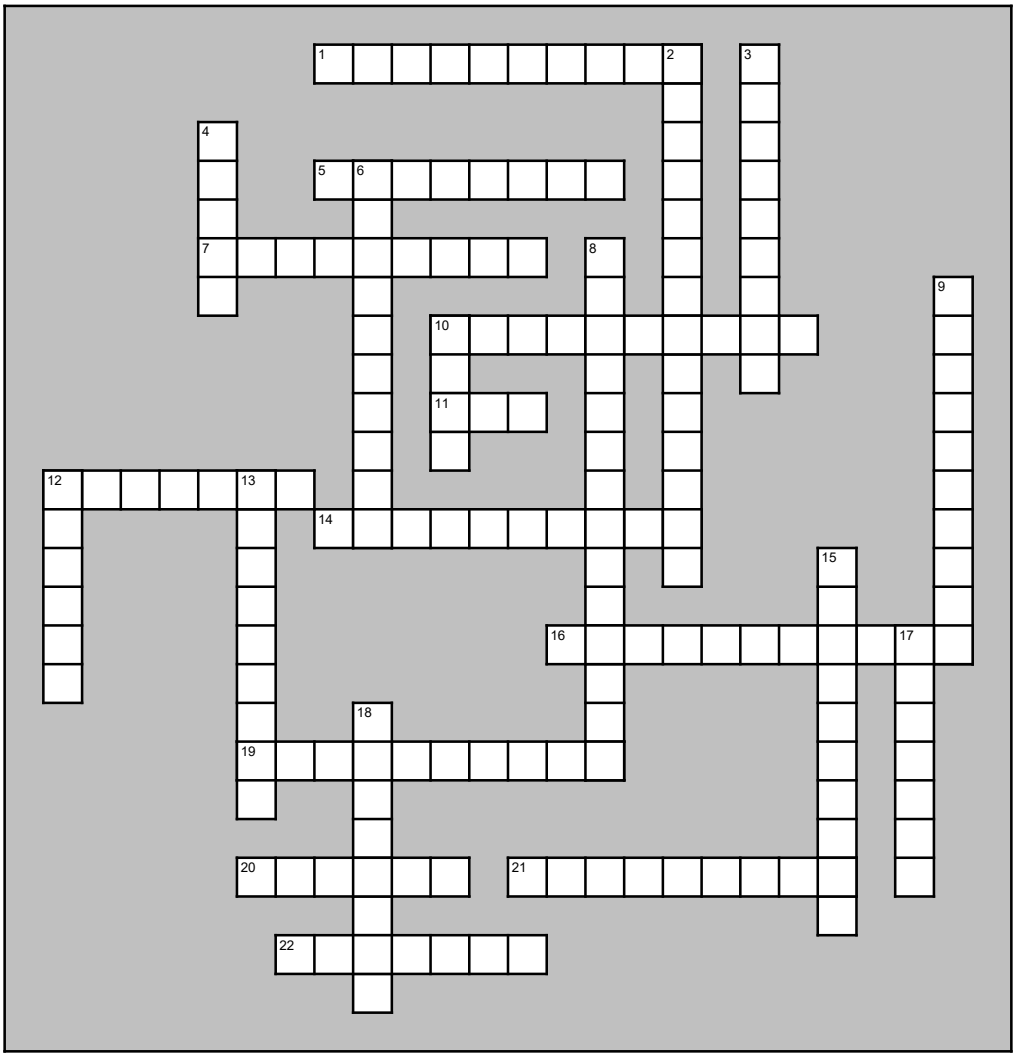
Crossword



Across

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

Down

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