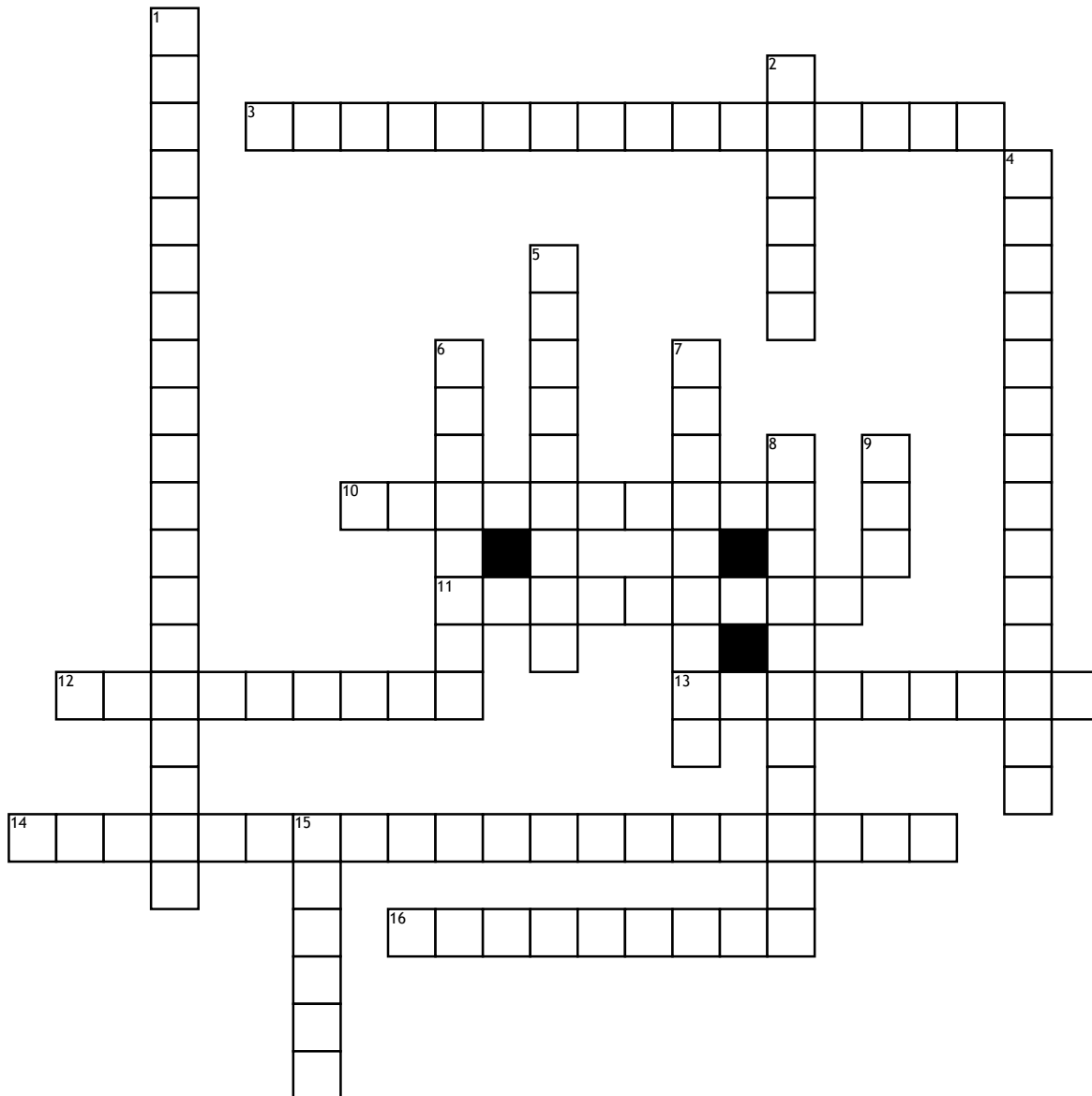


Life Transforms Energy



Across

3. Minimum amount of energy required to start a chemical reaction; lowered by enzymes

10. Describes a reaction that requires a net input of free energy to proceed (means "energy in")

11. The acceleration of a chemical reaction by a molecule (enzyme) that is unchanged by participating in the reaction

12. A molecule that enters a reaction and is changed by participating in it

13. Describes a reaction that ends with a net release of free energy (means "energy out")

14. Control of enzyme activity by a regulatory molecule or ion that binds to a region outside the enzyme's active site

16. inorganic substances such as metal ions that are required by some enzymes

Down

1. converts this energy (from photosynthesis) into a chemical bond energy that is readily released in small bursts

2. increase rate of chemical reactions and assisted by cofactors; affected by temperature, pH, salinity, and other environmental factors

4. formal study of heat and other forms of energy

5. Of an enzyme, a reactant that is specifically acted upon by the enzyme.

6. A molecule that is produced by a reaction

7. organic substances such as vitamins that are required by other enzymes

8. Pocket in an enzyme where substrates bind and a chemical reaction occurs (polypeptide chains fold up to form these)

9. liver enzyme that breaks down ethanol

15. The capacity to do work (ex. light, heat, electricity, motion)