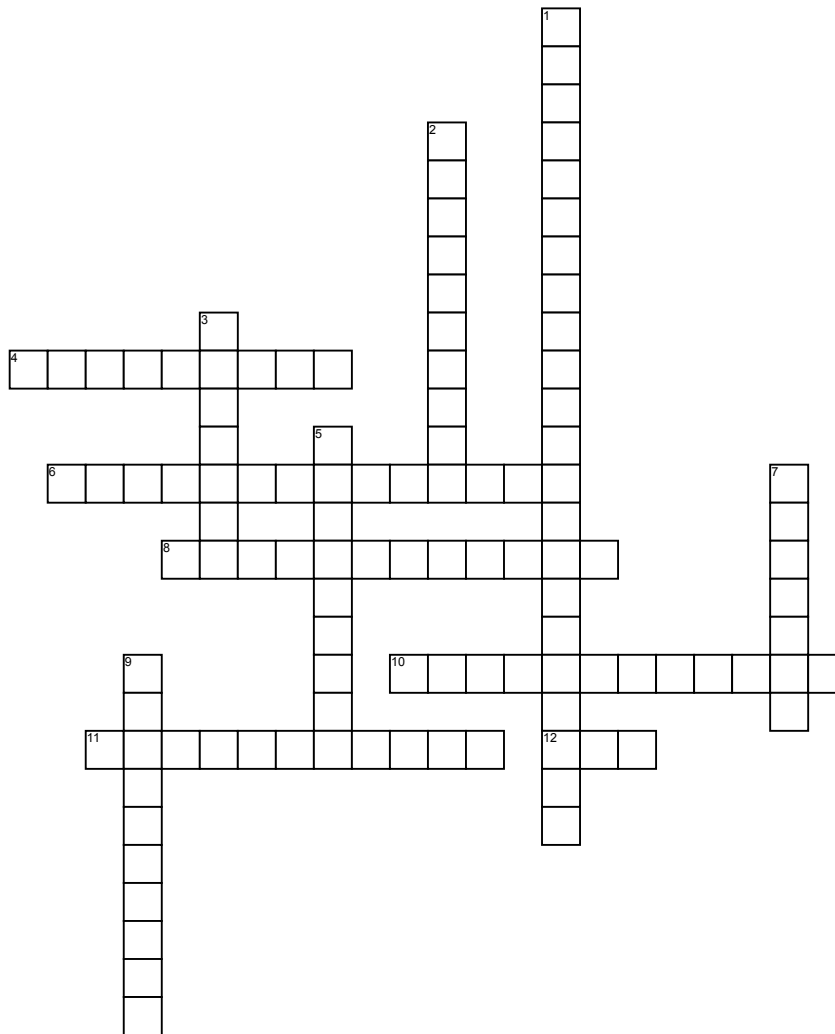


Photosynthesis & Cellular Respiration



Across

- 4. fluid portion of the cell outside the nucleus
- 6. process used by plants and other autotrophs to capture light energy and use it to power chemical reactions that convert carbon dioxide and water into oxygen and energy-rich carbohydrates such as sugars and starches
- 8. process by which cells release energy in the absence of oxygen
- 10. cell organelle that converts the chemical energy stored in food into compounds that are more convenient for the cell to use

- 11. a yellowish organic acid that occurs as an intermediate in many metabolic processes, especially glycolysis.

- 12. cluster of proteins that span the thylakoid membrane and allow hydrogen ions (H+) to pass through it

Down

- 1. series of electron carrier proteins that shuttle high-energy electrons during ATP-generating reactions
- 2. second stage of cellular respiration in which pyruvic acid is broken down into carbon dioxide in a series of energy-extracting reactions

- 3. a simple sugar that is an important energy source in living organisms and is a component of many carbohydrates.
- 5. requiring an absence of oxygen
- 7. process that requires oxygen
- 9. first set of reactions in cellular respiration during which 1 molecule of glucose, a 6-carbon compound, is transformed into 2 molecules of pyruvic acid, a 3-carbon compound

Word Bank

aerobic
 fermentation
 anaerobic
 pyruvic acid

electron transport chain
 ATP
 glucose
 Glycolysis

krebscycle
 mitochondria
 cytoplasm
 Photosynthesis