

ACROSS

- the process by which cells produce energy from carbohydrates; atmospheric oxygen combines with glucose to form water and carbon dioxide
- 5. a four-carbon compound of Krebs cycle that combines with acetyl CoA to form citric acid
- 9. a six-carbon compound formed in the Krebs cycle
- 11. describes a process that does not require oxygen
- the anaerobic process by which yeasts and other microorganisms break down sugars to form carbon dioxide and ethanol
- 14. the chemical breakdown of carbohydrates that produces lactic acid as the main end product
- 15. the fluid that is inside the inner membrane of a mitochondrion

DOWN

- 1. the breakdown of carbohydrates by enzymes, bacteria, yeasts, or mold in the absence of oxygen
- the anaerobic breakdown of glucose to pyruvic acid, which makes a small amount of energy available to cells in the form of ATP
- process in which NADH is used to make a large amount of ATP; the part of respiration that is carried out in the presence of oxygen
- 6. acetyl coenzyme A, a compound that is synthesized by cells and that plays a major role in metabolism
- 7. a unit of energy equal to 1,000 cal
- 8. the reduced form of NAD+; an electron-carrying molecule that functions in cellular respiration
- 10. a series of biochemical reactions that convert pyruvic acid into carbon dioxide and water
- the three-carbon compound that is produced during glycolysis and needed for both the aerobic and anaerobic pathways of cellular respiration