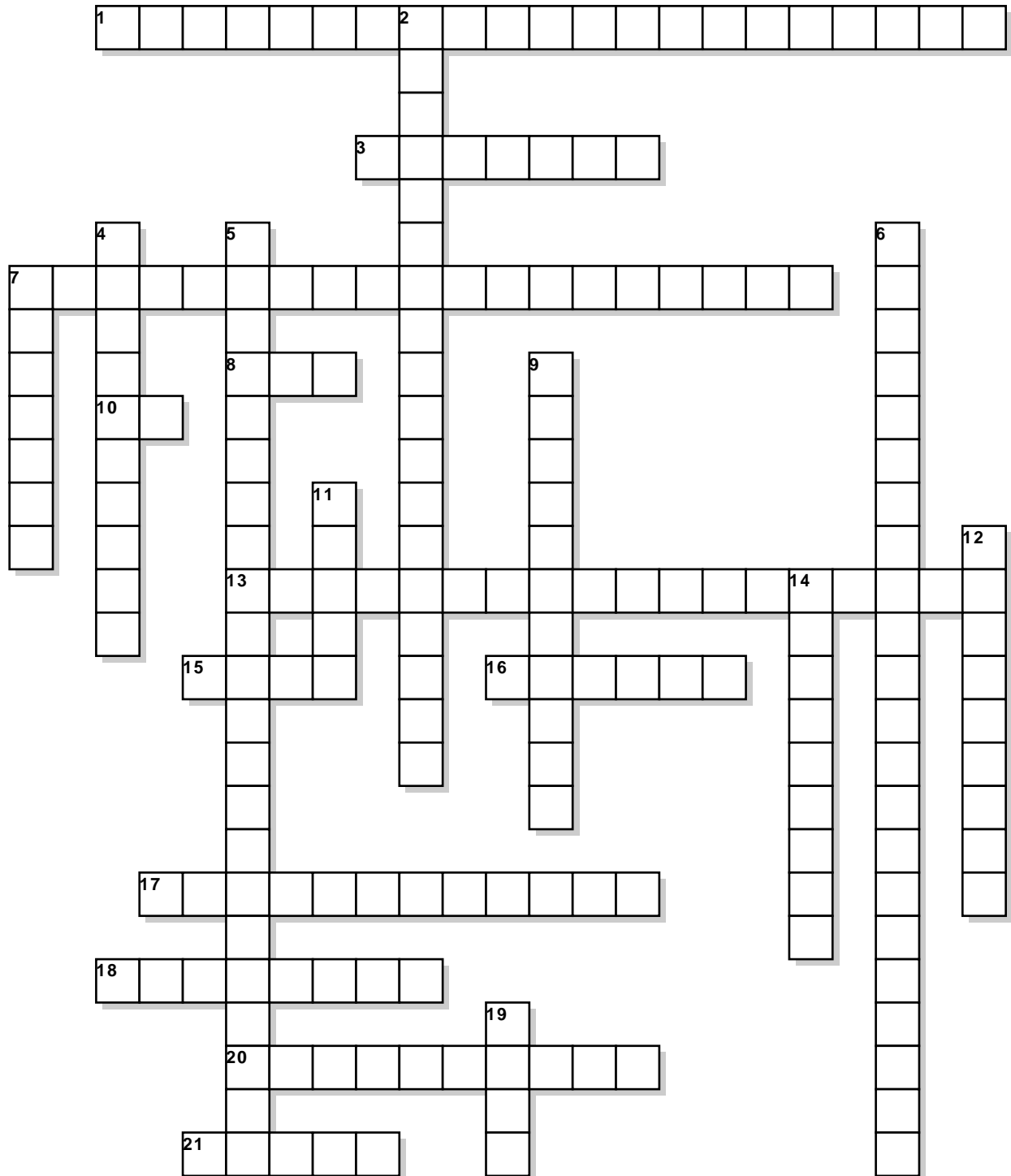


Biology Crossword Puzzle 9



Across

- 1 Process which produces alcohol, CO₂, and NAD⁺ from pyruvic acid and NADH.
- 3 Process that requires oxygen.
- 7 Breakdown of glucose in the presence of oxygen to produce cellular energy.
- 8 Abbreviation of 1-carbon molecule given off as waste in the Krebs cycle.
- 10 Abbreviation of the final electron acceptor which gets rid of low-energy electrons and hydrogen ions.
- 13 Event occurring in the matrix which serves to prepare pyruvic acid for entry into the next stage of respiration.
- 15 Net yield of ATP per glucose molecule in glycolysis or Krebs cycle individually.
- 16 Innermost compartment of the mitochondrion.
- 17 Process by which cells release energy in the absence of oxygen which follows glycolysis.
- 18 Carbohydrate which the body stores energy in; lasts for 15-20 minutes of activity.
- 20 2-carbon molecule formed in the matrix from pyruvic acid which later joins with co-enzyme A.
- 21 Net yield of NADH per glucose molecule in glycolysis.

Down

- 2 Location where H⁺ ions build up, making it positively charged relative to the matrix.
- 4 First set of reactions in cellular respiration in which a molecule of glucose is broken into 2 molecules of pyruvic acid.
- 5 System that uses the high-energy electrons from glycolysis and the Krebs cycle to convert ADP into ATP.
- 6 Process which produces lactic acid and NAD⁺ from pyruvic acid and NADH.
- 7 Amount of energy needed to raise the temperature of 1 gram of water by 1 degree Celsius.
- 9 3-carbon molecule of which two are converted from glucose at the end of glycolysis.
- 11 Net yield of ATP per glucose molecule in the electron transport system.
- 12 Process that does not require oxygen, such as glycolysis.
- 14 Location of glycolysis and fermentation in a cell.
- 19 Number of ATP produced by 1 pair of high-energy electrons that move down the full length of the ETC.

Possible Answers:

2 ATP, 2 NADH, 3 ATP, 32 ATP, acetic acid, aerobic, alcoholic fermentation, anaerobic, calorie, cellular respiration, CO₂, cytoplasm, electron transport chain, fermentation, glycogen, glycolysis, intermembrane space, lactic acid fermentation, matrix, O₂, pyruvic acid, transition reaction