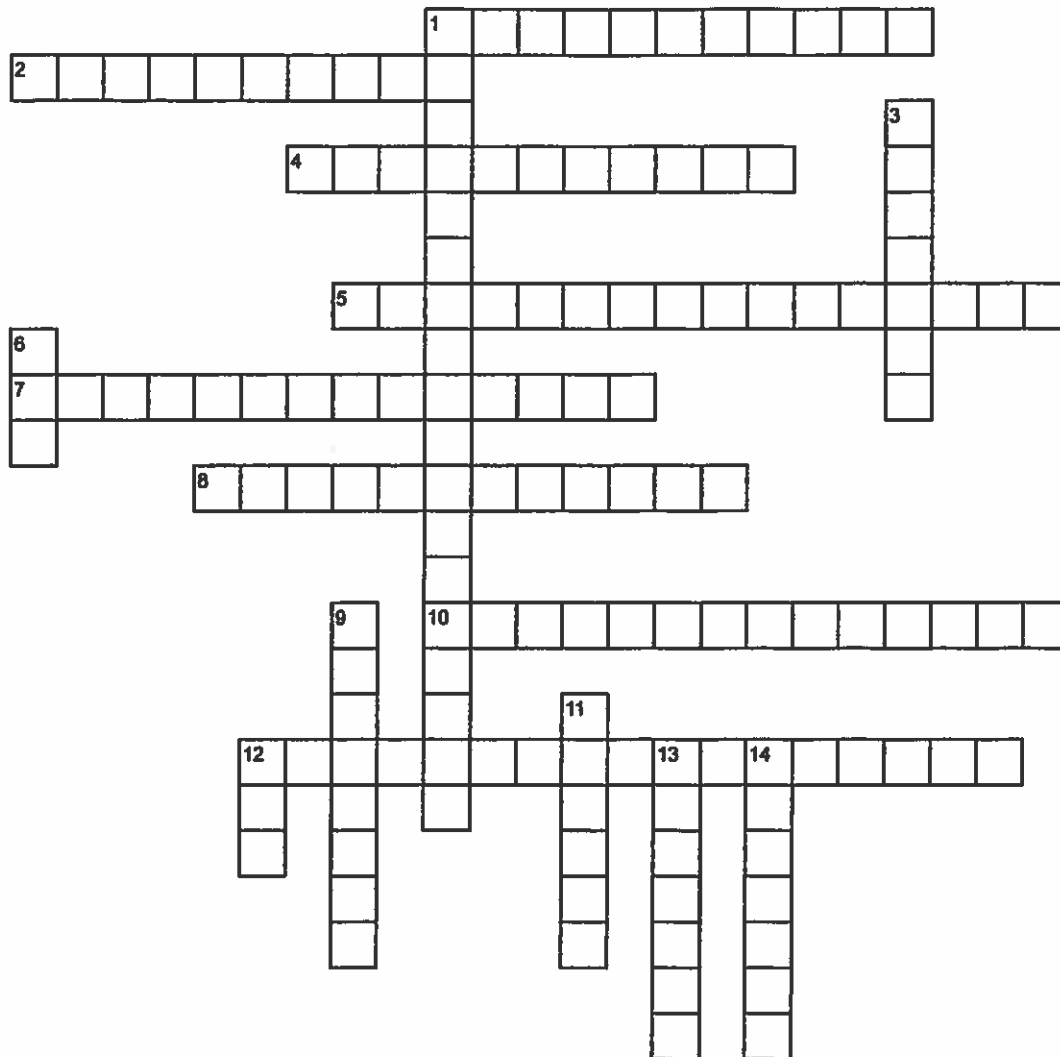


Biotechnology



Across

- 1 using biotechnology to treat genetic disorders by inserting normal genes into the cells of a person who has the disorder
- 2 a tool which spins samples very fast; used to separate solids and liquids and concentrate heavier parts of cells at the bottom of a tube.
- 4 the liquid portion of a sample spun down in a centrifuge
- 5 a genetic disorder in which the protein hemoglobin is abnormal. This causes the red blood cells to become sickle shaped. Carriers of the disease can be identified by gel electrophoresis.
- 7 a genetic disorder which affects the lungs; it can be treated using recombinant DNA gene therapy.
- 8 an important tool used in biotechnology; it is used to measure very small amounts of liquids.
- 10 when the DNA from one organism is combined with the DNA of another
- 12 a method of analyzing a segment of DNA in order to match it with another person. It can be used to match a suspect with a crime scene or to determine family relationships.

Down

- 1 a technique which is used to separate fragments of DNA by weight and charge. It may be used to identify a carrier of a genetic disorder or in DNA fingerprinting.
- 3 molecules made of amino acids. The order of the amino acids is determined by the order of nitrogen bases in our DNA
- 6 polymerase chain reaction ; a technique used to amplify DNA
- 9 a change in the genetic code; may result in a genetic disorder
- 11 the solid material that is at the bottom of the tube after centrifugation.
- 12 deoxyribonucleic acid ; the molecule which contains all our genetic information
- 13 a small round piece of DNA found in bacteria; used as a vector to insert genes when performing recombinant DNA.
- 14 a protein needed by diabetics that can be produced in bacteria using recombinant DNA.