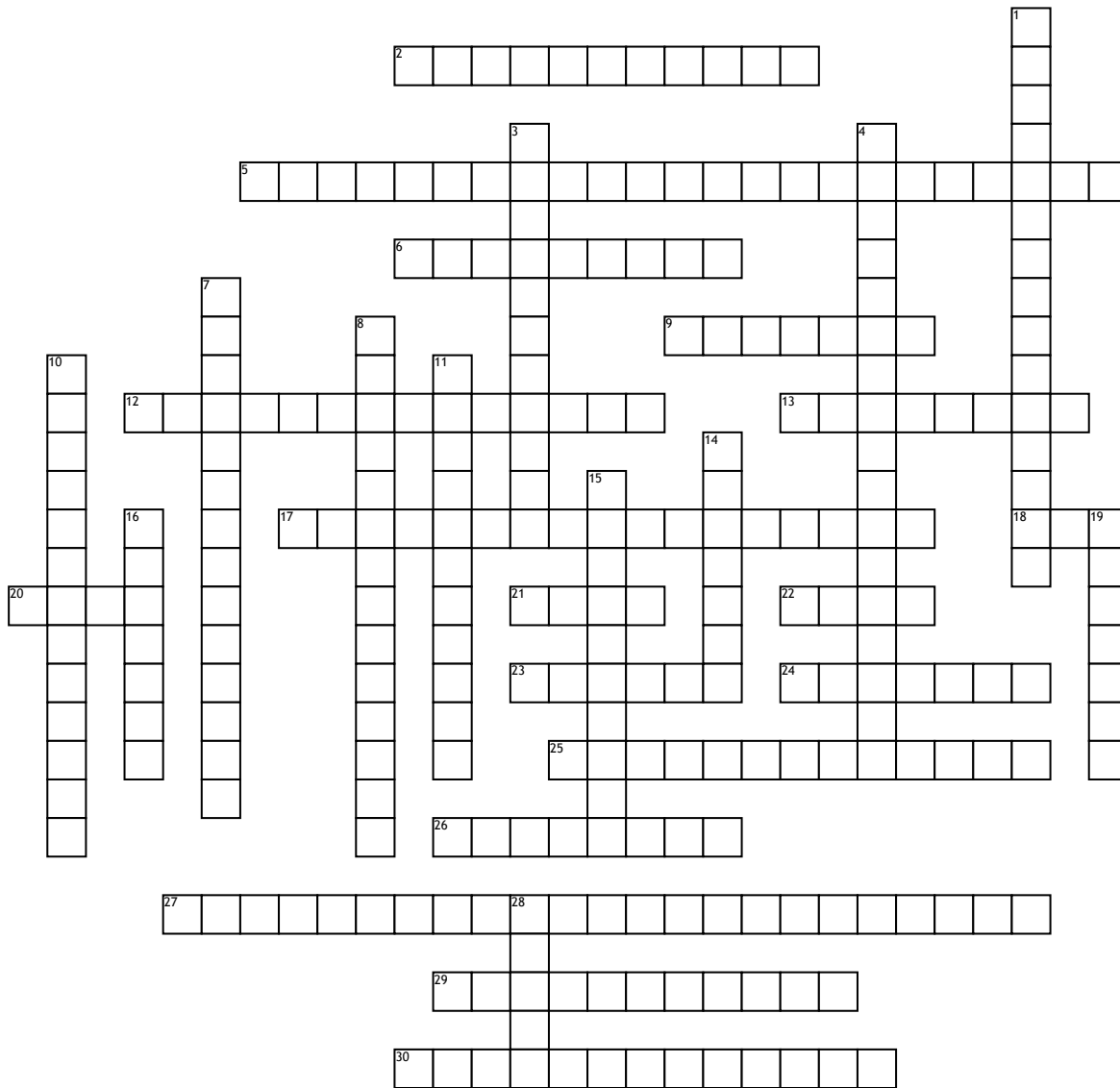


Biology Crossword



Across

2. the transplantation of normal genes into cells in place of missing or defective ones in order to correct genetic disorders.
5. a technique used in molecular biology to make a single copy or a few copies of a segment of DNA across several orders of magnitude, generating thousands to millions of copies of a particular DNA sequence.
6. scientific tests or techniques used in connection with the detection of crime.
9. a genetic structure in a cell that can replicate independently of the chromosomes, typically a small circular DNA strand in the cytoplasm of a bacterium or protozoan. Plasmids are much used in the laboratory manipulation of genes.
12. a phosphorus atom bound to four oxygen atoms, that has many important roles.
13. a compound found in living tissue as a constituent base of nucleic acids. It is paired with guanine in double-stranded DNA.
17. the analysis of DNA from samples of body tissues or fluids, especially when conducted in order to identify individuals.
18. a nucleic acid present in all living cells that acts as a messenger carrying instructions from DNA for controlling the synthesis of proteins.
20. a subtype of RNA and a molecule that carries a portion of the DNA code to other parts of the cell for processing.
21. small RNA molecules that carry amino acids to the ribosome for polymerization into a polypeptide.

22. a molecular component of a ribosome, the cell's essential protein factory.
23. an enzyme that brings about ligation of DNA or another substance.
24. a compound that is one of the four constituent bases of nucleic acids. A pyrimidine derivative, it is paired with adenine in double-stranded DNA.
25. enzymes that synthesize DNA molecules from deoxyribonucleotides.
26. An enzyme that uses energy from nucleoside triphosphate hydrolysis in order to unwind the two annealed nucleic acid strands.
27. (of an organism or crop) containing genetic material that has been artificially altered so as to produce a desired characteristic.
29. a sugar acquired from ribose by replacing a hydroxyl group with hydrogen.
30. a gene or short sequence of DNA used to identify a chromosome or to locate other genes on a genetic map.

Down

1. the area where the replication of DNA will take place.
3. a pair of nitrogenous bases that connects the complementary strands of DNA or of double-stranded RNA and consists of a purine linked by hydrogen bonds to a pyrimidine: adenine-thymine and guanine-cytosine in DNA, and adenine-uracil and guanine-cytosine in RNA. base pair in Science.

4. an enzyme produced chiefly by certain bacteria, having the property of cleaving DNA molecules at or near a specific sequence of bases.
7. DNA that has been formed artificially by combining constituents from different organisms.
8. The rule that in DNA there is always equality in quantity between the bases A and T and between the bases G and C.
10. a collection of microscopic DNA spots attached to a solid surface. Scientists use DNA microarrays to measure the expression levels of large numbers of genes simultaneously or to genotype multiple regions of a genome.
11. The act or process of generating a copy.
14. an enzyme that synthesizes short RNA sequences called primers.
15. relating or denoting an organism that contains genetic material into which DNA from an unrelated organism has been artificially produced.
16. a compound that occurs in guano and fish scales, and is one of the four constituent bases of nucleic acids. A purine derivative, it is paired with cytosine in double-stranded DNA.
19. a compound that is one of the four constituent bases of nucleic acids. A purine derivative, it is paired with thymine in double-stranded DNA.
28. an organism or cell, or group of organisms or cells, produced asexually from one ancestor or stock, to which they are genetically identical.