

**CHAPTER**

**9**

**VOCABULARY**

**DNA: The Genetic Material**

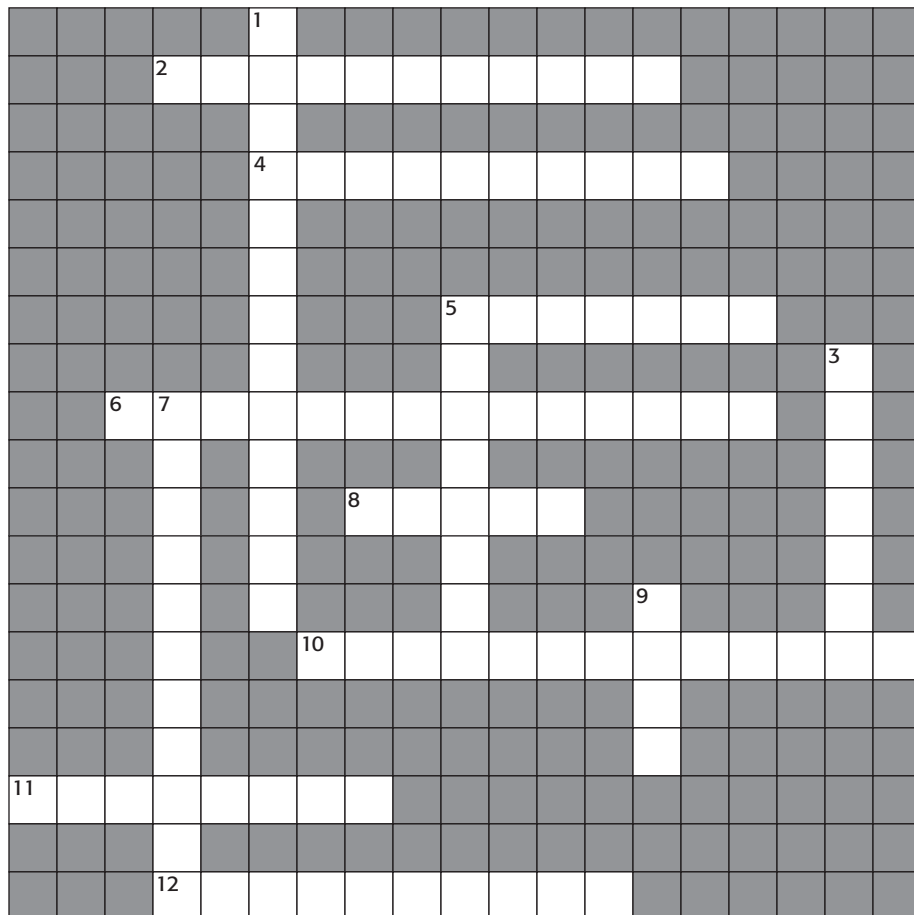
Complete the crossword puzzle using the clues provided.

**ACROSS**

- 2. five-carbon sugar found in DNA nucleotides
- 4. enzyme that adds nucleotides to exposed nitrogen bases
- 5. substance prepared from killed or weakened microorganisms
- 6. change in phenotype of bacteria caused by the presence of foreign genetic material
- 8. The term “double \_\_\_\_\_” is used to describe the shape of DNA.
- 10. a virus that infects bacteria
- 11. enzyme that separates DNA by breaking the hydrogen bonds that link the nitrogen bases
- 12. name for DNA subunit

**DOWN**

- 1. relationship of two DNA strands to each other
- 3. Base-\_\_\_\_\_ rules describe the arrangement of the nitrogen bases between two DNA strands.
- 5. disease-causing
- 7. the process by which DNA is copied
- 9. A replication \_\_\_\_\_ is the area that results after the double helix separates during replication.



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17. Punnett square
18. test cross
19. probability
20. pedigree
21. sex-linked trait
22. polygenic trait
23. incomplete dominance
24. codominance
25. multiple alleles

## CHAPTER 9

### DNA: The Genetic Material

#### ACROSS

2. DEOXYRIBOSE
4. POLYMERASE
5. VACCINE
6. TRANSFORMATION
8. HELIX
10. BACTERIOPHAGE
11. HELICASE
12. NUCLEOTIDE

#### DOWN

1. COMPLEMENTARY
3. PAIRING
5. VIRULENT
7. REPLICATION
9. FORK

## CHAPTER 10

### How Proteins Are Made

#### ACROSS

2. LAC
3. RIBONUCLEIC
4. POLYMERASE
5. MESSENGER
6. GENE
8. TRANSCRIPTION
12. CODON
14. OPERATOR
16. INTRON

#### DOWN

1. URACIL
3. REPRESSOR
7. EXON
8. TRANSLATION
9. ANTICODON
10. RIBOSOMAL
11. TRANSFER
13. GENETIC
15. OPERON

## CHAPTER 11

### Gene Technology

1. c; Human Genome Project
2. h; vector
3. g; plasmid
4. i; recombinant DNA
5. b; vaccine
6. e; restriction enzymes
7. d; gene therapy
8. j; gene cloning
9. f; electrophoresis
10. a; transgenic animal
11. k; genetic engineering

## CHAPTER 12

### History of Life on Earth

1. A radioisotope is an unstable element that breaks up and gives off energy in the form of radiation; the half-life is the time it takes for half an amount of the element to change.
2. Spontaneous origin refers to the origin of life from simple chemicals; microspheres are vesicles made of short chains of amino acids and might have been the first step toward cellular organization.
3. Eubacteria are prokaryotes whose cell walls contain a chemical called peptidoglycan and have the same type of lipids in their cell membranes as eukaryotes; archaebacteria are prokaryotes that lack peptidoglycan in their cell walls and have unique lipids in their cell membrane.
4. Mutualism is a partnership in which both organisms benefit. An example is a mycorrhiza, which is the partnership between fungi and the roots of plants. The fungi provide minerals to the plant, and the plant provides nutrients to the fungi.
5. d
6. e
7. f
8. g
9. h
10. i
11. a
12. c
13. b

## CHAPTER 13

### The Theory of Evolution

1. d
2. a
3. b
4. c
5. b