

D 12.

 B 20.

 C 1.

 C 13.

 D 21.

 B 2.

 C 14.

 D 3.

 C 7.

 B 15.

 D 23.

 B 4.

 A 8.

 A 16.

 C 22.

 C 24.

 D 5.

 B 9.

 B 17.

 B 25.

 C 6.

 D 10.

 D 18.

 C 26.

 B 11.

 C 19.

D 27.

C 40.

C 53.

A 28.

C 41.

A 29.

D 42.

D 48.

D 35.

C 43.

D 30.

A 49.

A 54.

C 36.

D 44.

B 31.

C 50.

C 55.

C 37.

C 45.

B 32.

A 51.

B 56.

B 38.

B 46.

B 33.

A 52.

C 57.

D 39.

D 47.

D 34.

C 63.

C 69.

A 74.

A 64.

D 70.

A 75.

B 65.

D 58.

B 77.

C 59.

A 78.

C 66.

C 76.

A 60.

D 71.

D 61.

C 67.

A 72.

B 62.

A 68.

A 73.

D 86.

D 93.

C 94.

A 87.

D 80.

D 88.

A 81.

B 89.

D 83.

B 82.

B 90.

D 95.

D 79.

B 84.

A 91.

B 96.

D 85.

D 92.

C 97.

B 98.

A 106.

C 114.

A 122.

C 99.

A 107.

A 115.

B 123.

C 100.

C 108.

D 116.

D 124.

B 101.

B 109.

C 117.

C 125.

A 127.

B 102.

C 110.

D 118.

D 126.

B 128.

D 103.

D 111.

B 119.

D 129.

B 104.

A 112.

D 120.

A 130.

C 105.

D 113.

C 121.

B 131.

A 135.

A 148.

B 132.

A 136.

A 149.

A 137.

C 138.

B 146.

C 139.

D 143.

B 150.

B 140.

C 144.

D 133.

C 145.

B 141.

C 134.

B 142.

C 147.

D 161.

 B 162.

 C 163.

 B 155.

 D 153.

 A 156.

 D 164.

 D 157.

 A 154.

 B 165.

 A 151.

 A 158.

 C 152.

 A 159.

 A 160.

A 166.

B 177.

C 171.

F 1. light

F 2. nucleolus

C 172.

B 169.

B 170.

B 173.

C 174.

F 3. rough

F 4. passive, facilitated
diffusion

A 167.

T 5.

D 175.

A 168.

A 176.

F 6. B

F 7. Calvin Cycle

F 8. oxygen

T 9.

F 10. larger

T 11.

COMPLETION

1. ANS: A, cell wall

PTS: 1 DIF: L2 REF: p. 581
OBJ: 20.2.2 Describe how prokaryotes vary in structure and function.
STA: AZ.4.1.2 TOP: Foundation Edition BLM: application

2. ANS:

bacillus

rod-shaped prokaryote

PTS: 1 DIF: L1 REF: p. 582
OBJ: 20.2.2 Describe how prokaryotes vary in structure and function.
STA: AZ.4.1.2 TOP: Foundation Edition BLM: application

3. ANS: nitrogen fixation

PTS: 1 DIF: L1 REF: p. 585
OBJ: 20.2.3 Explain the role of bacteria in the living world. STA: AZ.4.3.1
TOP: Foundation Edition BLM: knowledge

4. ANS: decomposers

PTS: 1 DIF: L1 REF: p. 584
OBJ: 20.2.3 Explain the role of bacteria in the living world. STA: AZ.4.3.1
TOP: Foundation Edition BLM: comprehension

5. ANS:

reproduce without a host

reproduce independently

PTS: 1 DIF: L1 REF: p. 574
OBJ: 20.1.1 Explain how viruses reproduce. STA: AZ.1.4.4 | AZ.2.1.2 | AZ.4.2.2
TOP: Foundation Edition BLM: knowledge

6. ANS: prions
- PTS: 1 DIF: L3 REF: p. 592
 OBJ: 20.3.3 Define emerging disease and explain why emerging diseases are a threat to human health.
 BLM: application
7. ANS: protists
- PTS: 1 DIF: L1 REF: p. 602 OBJ: 21.1.1 Explain what a protist is.
 STA: AZ.1.4.4 | AZ.4.1.2 | AZ.4.4.6 TOP: Foundation Edition
 BLM: knowledge
8. ANS: cytoplasm, pseudopod
- PTS: 1 DIF: L3 REF: p. 606
 OBJ: 21.2.1 Describe the various methods of protist locomotion.
 STA: AZ.4.1.2 | AZ.4.4.6 | AZ.4.5.2 BLM: knowledge
9. ANS: nutrients and oxygen
- PTS: 1 DIF: L2 REF: p. 611
 OBJ: 21.3.1 Describe the ecological significance of photosynthetic protists.
 STA: AZ.4.4.6 | AZ.4.5.4 TOP: Foundation Edition
 BLM: comprehension
10. ANS:
 mutualistic
 symbiotic
- PTS: 1 DIF: L1 REF: p. 616
 OBJ: 21.3.3 Identify the symbiotic relationships that involve protists.
 STA: AZ.4.3.1 | AZ.4.4.6 TOP: Foundation Edition
 BLM: knowledge
11. ANS: enzymes
- PTS: 1 DIF: L2 REF: p. 622
 OBJ: 21.4.2 Describe how fungi affect homeostasis. STA: AZ.1.1.3 | AZ.4.4.6 | AZ.4.5.4
 BLM: knowledge
12. ANS: lichen
- PTS: 1 DIF: L2 REF: p. 623
 OBJ: 21.4.2 Describe how fungi affect homeostasis. STA: AZ.1.1.3 | AZ.4.4.6 | AZ.4.5.4
 BLM: application
13. ANS: flowering plants angiosperms
- PTS: 1 DIF: L2 REF: p. 636
 OBJ: 22.1.2 Describe how the first plants evolved. STA: AZ.4.4.5 | AZ.4.4.6
 TOP: Foundation Edition BLM: application

14. ANS: **Bryophytes**
- PTS: 1 DIF: L2 REF: p. 641
 OBJ: 22.2.2 Describe the adaptations of bryophytes. STA: AZ.4.1.5 | AZ.4.2.4 | AZ.4.4.6
 TOP: Foundation Edition BLM: comprehension
15. ANS: **tracheophytes**
- PTS: 1 DIF: L2 REF: p. 643
 OBJ: 22.2.3 Explain the importance of vascular tissue. STA: AZ.1.4.2 | AZ.4.4.5 | AZ.4.4.6
 BLM: knowledge
16. ANS: **herbaceous plant**
- PTS: 1 DIF: L1 REF: p. 653
 OBJ: 22.4.2 Identify some of the ways angiosperms can be categorized.
 STA: AZ.4.4.6 TOP: Foundation Edition BLM: comprehension
17. ANS: **root hairs**
- PTS: 1 DIF: L2 REF: p. 670
 OBJ: 23.2.1 Describe the main tissues in a mature root. TOP: Foundation Edition
 BLM: knowledge
18. ANS: **increases**
- PTS: 1 DIF: L3 REF: p. 672
 OBJ: 23.2.2 Describe the different functions of roots. STA: AZ.4.1.4
 BLM: comprehension
19. ANS: **buds**
- PTS: 1 DIF: L1 REF: p. 675
 OBJ: 23.3.1 Describe the main functions of stems. STA: AZ.4.4.6
 TOP: Foundation Edition BLM: knowledge
20. ANS: **vascular cambium, cork cambium**
- PTS: 1 DIF: L2 REF: p. 676 | p. 677
 OBJ: 23.3.2 Contrast the processes of primary growth and secondary growth in stems.
 STA: AZ.4.4.6 BLM: comprehension
21. ANS: **cohesion, adhesion**
- PTS: 1 DIF: L2 REF: p. 686
 OBJ: 23.5.1 Explain the process of water movement in a plant. STA: AZ.1.4.4 | AZ.4.1.2
 TOP: Foundation Edition BLM: comprehension
22. ANS: **anther**
- PTS: 1 DIF: L1 REF: p. 696 | p. 697
 OBJ: 24.1.1 Identify the functions of various structures in a flower.
 STA: AZ.1.4.4 | AZ.4.4.6 TOP: Foundation Edition
 BLM: knowledge

23. ANS: embryo sac

PTS: 1 DIF: L2 REF: p. 699
 OBJ: 24.1.2 Explain how fertilization differs between angiosperms and other plants.
 STA: AZ.4.1.5 | AZ.4.2.4 | AZ.4.4.6 BLM: knowledge

SHORT ANSWER

1. ANS:

The circles are the phosphate group, the pentagons are deoxyribose, and the A and T (adenosine and thymine) are the bases.

PTS: 1 DIF: L2 REF: p. 345
 OBJ: 12.2.1 Identify the chemical components of DNA. STA: AZ.4.2.1 | AZ.4.2.2
 TOP: Foundation Edition BLM: application

2. ANS:

The molecule is DNA polymerase, an enzyme that joins individual nucleotides to make a strand of DNA.

PTS: 1 DIF: L1 REF: p. 351
 OBJ: 12.3.1 Summarize the events of DNA replication. STA: AZ.2.1.2 | AZ.4.2.1 | AZ.4.2.2
 TOP: Foundation Edition BLM: knowledge

3. ANS:

Molecule B is tRNA, which carries amino acids to the ribosomes.

PTS: 1 DIF: L2 REF: p. 363 | p. 364
 OBJ: 13.1.1 Contrast RNA and DNA. STA: AZ.2.1.2 | AZ.4.2.1 | AZ.4.2.2
 TOP: Foundation Edition BLM: analysis

SCIENCE SKILLS

1. ANS:

structure A, the cerebrum

PTS: 1 DIF: L2 REF: p. 902
 OBJ: 31.2.1 Discuss the functions of the brain and spinal cord. STA: AZ.4.5.5
 TOP: Foundation Edition BLM: comprehension

2. ANS:

A

PTS: 1 DIF: L2 REF: p. 936
 OBJ: 32.3.2 Identify the structures of the integumentary system.
 STA: AZ.4.5.5 TOP: Foundation Edition BLM: application