27. halogens
28. Both are used as disinfectants.
29. salts, sodium chloride
30. Answers may vary. Sample answer: Chlorinating water helps protect people from many diseases by killing the organisms that cause the diseases.
31. C
32. noble gases
33. density
34. D

Directed Reading B

SECTION: ARRANGING THE ELEMENTS

1. D
2. A
3. C
4. C
5. B
6. A
7. C
8. A
9. metals
10. nonmetals
11. metalloids
12. semiconductors
13. mendelevium
14. californium
15. chemical symbol
16. C
17. C
18. C
19. B
20. B

SECTION: GROUPING THE ELEMENTS

1. C
2. B
3. B
4. A
5. B
6. D
7. C
8. C
9. C
10. A
11. Boron
12. aluminum
13. carbon
14. tin
15. B
16. D
17. A
18. B
19. A
20. B
21. D
22. C
23. C
24. A
25. C

Vocabulary and Section Summary

SECTION: ARRANGING THE ELEMENTS

1. periodic: describes something that occurs or repeats at regular intervals
2. periodic law: the law that states that the repeating chemical and physical properties of elements change periodically with the atomic numbers of the elements
3. period: in chemistry, a horizontal row of elements in the periodic table
4. group: a vertical column of elements in the periodic table; elements in a group share chemical properties

SECTION: GROUPING THE ELEMENTS

1. alkali metal: one of the elements of Group 1 of the periodic table (lithium, sodium, potassium, rubidium, cesium, and francium)
2. alkaline-earth metal: one of the elements of Group 2 of the periodic table (beryllium, magnesium, calcium, strontium, barium, and radium)
3. halogen: one of the elements of Group 17 of the periodic table (fluorine, chlorine, bromine, iodine, and astatine); halogens combine with most metals to form salts
4. noble gas: one of the elements of Group 18 of the periodic table (helium, neon, argon, krypton, xenon, and radon); noble gases are unreactive

Section Review

SECTION: ARRANGING THE ELEMENTS

1. Sample answer: *Periodic* means "happening in a regular repeating pattern."
2. C
3. A period in the periodic table is a horizontal row of elements. A group is a vertical column of elements.
4. atomic mass
5. The repeating chemical and physical properties of elements change periodically with the atomic numbers of the elements.

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