

Chapter 8, Part 1.

1. The _____ were the first people to suggest a hypothesis about the nature of matter.
2. It suggested that all matter was made of the 4 elements called: _____.
3. An English scientist called _____ created a new definition of an _____.
4. What was Boyle's conclusion? _____.
5. The scientific revolution happened in the _____.
6. The scientists _____, _____, and _____ discovered new _____.
7. Read Activity 8C and briefly consider the answers to questions #1, 2, 3, 4, and 5.

Part 2.

8. _____ discovered how to tell _____ from _____ in a laboratory.
9. _____ theorized how to tell elements from non-elements leading to his _____.
10. Describe the four parts of Dalton's Atomic Theory:
11. Read the profile about John Dalton found on page 167.
12. Review the terms Atomic number, Mass number, Atomic mass, Isotopes, and Neutral atom.
13. Briefly explain Bohr's model of electron arrangement:
14. Sketch figure 8.4 on page 171 and read about orbits. Do the instant practice on page 172.

15. Elements produce a _____ of coloured lines made visible through a _____.
16. Describe Bohr's explanation of why each element has its own spectrum:
17. Read the Review 8.2, answer questions #1-3 found on page 174.

Part 3.

18. Who developed the first periodic table? _____.
19. How did he sort the various elements? _____.
20. In what way is the modern periodic table different to the first one? Why?

Part 4.

21. The _____ of the periodic table are known as _____.
22. The only elements which do not form compounds with hydrogen and fluorine are _____, _____, and _____. These _____ are unlikely to _____ because their _____ are full.
23. The most active metals on the periodic table are called the _____.
24. As a result, they are never found as _____ in nature since they easily combine with other elements. _____ are very common everywhere on earth.
25. The elements in the _____ need one _____ in their outer orbits. Both _____ and _____ make up the most reactive of the _____.
26. Why is Hydrogen considered to be a family of one?
27. _____ rows of elements on the periodic table are called _____. As you go from _____ within a period, the elements change from _____ to _____, then lastly to _____.

Chapter 9, Part 5.

28. Substances made of several _____ combine in a definite formula are called _____.
29. All compounds have their own chemical _____.

30. What is meant by the terms Acid or Base?
31. What is the result of a reaction between an acid and a base? _____.
32. _____, _____, and _____ are used to classify _____ in chemistry.
33. Dyes such as _____ which help classify acids and bases are called _____.
34. List and give examples of some practical uses of acids and bases:
35. What is meant by the process of Neutralization? _____.
36. Give some examples of neutralization: _____.
37. Copy the table 9.5 found on page 192 and list some practical uses of salts:

Part 6.

38. Read about the formation of sodium chloride on pages 193 to 195. During this process, the sodium atom _____ an electron and this results in a _____ charge. This because the sodium atom has 11 positive _____ and only 10 negative _____. Chlorine has now _____ an extra _____ and is no longer a _____.
39. The movement of _____ from one atom to another is called _____. The resulting charged particles are called _____. Because the sodium and chlorine ions have opposite charges, they _____ each other and make an _____.
40. The force attraction of positive and negatively charged ions is called and _____.

41. Ionic _____ are formed by _____ between _____ and _____.
42. _____ refers to the number of electrons an atom must gain or lose to be stable.
43. Read figure 9.12 on page 196. Read about the combining capacity of magnesium in figure 9.14.

Part 7.

44. Read *Example II* on page 199 and study figure 9.15 on ionic bonding of potassium and fluorine.
45. Describe the rules for writing chemical formulas:

46. Try *Example III* on page 200/201. Try the instant practice exercises #1 to 3 on page 201.
47. If there are only 2 elements in an _____ bond, the name ends with _____.
48. List some elements which have more than one combining capacity? _____.
49. If ionic compounds are dissolved in water, groups of ions which stay together are _____.
50. List the Polyatomic Ions found in figure 9.8. Read *Example V* on page 203. These ions, when they are part of a formula, _____ change the endings of their names.

Part 8.

51. When two _____ atoms come close together, each electron is _____ to the other's nucleus. The concept of _____ holding atoms together is called a _____.
52. Molecules with two atoms with covalent bonds are called _____.
53. Copy the chart of *Diatomic Covalent Molecules* found in figure 9.9 on page 206.

54. When there is electron _____ between non-metal elements, a _____ is formed.
55. Draw the four covalent compound examples shown in figure 9.22 on page 206.
56. The combining capacity of an atom tells how many _____ it must _____, _____, or _____ to achieve a _____ outer _____.
57. Use the “Criss-Cross “ method shown in writing formulas for covalent compounds on page 208 and do the instant practice on page 209 of your text book:
58. List several common covalent compounds whose names tell nothing about their formulas:
59. _____ help us identify when two elements form two or more _____.
60. List several common covalent prefixes: _____.