STUDY GUIDE   Chapter 17
The Periodic Table

Use the periodic table in your reference tables as needed to answer the following questions. Place your answers on the lines after the questions.

1. List two types of information that are given in each box of this periodic table.

a. _____

b. _____

2. In this table, where are the metals located?_____

3. Where are the nonmetals located?_____

4. What are the elements in groups 3 through 12 called?_____

5. What are the elements called that are next to the stair-step-shaped line on the right side of the table?_____

   _____

6. What do we call the letter or group of letters that represents an element?_____

7. How many elements are included in the modern periodic table?_____

8. What name is given to the elements in group 18?_____

9. What name is given to all vertical columns in this table?_____

10. What name is given to each horizontal row in this table?_____

ENRICHMENT   Chapter 17
The Periodic Table

PREDICTING AN ELEMENT'S GROUP AND PERIOD

    Several scientists, including Newlands, Meyer, and Mendeleev worked on classification systems that grouped elements according to their properties. They found that these properties repeated in a regular or periodic manner. Scientists used this fact to predict properties of undiscovered elements.

    Review electron arrangement from your textbook.

    In Table 1, write the maximum number of electrons that can fill each energy level on the blanks in the table heading. Write the total number of electrons for each element in the first column labeled Total. For each element, assign the correct number of electrons to each energy level.

    Complete Table 2 by using the information from the six elements studied.

Table 1

Element	Electrons			
	Total	**Level 1**	**Level 2**	**Level 3**
Argon				
Carbon				
Helium				
Lithium				
Silicon				
Sodium				

Table 2

Element	Energy level of outer electrons	Located in period	Number of outer electrons	Located in group
Ar				
C				
He				
Li				
Si				
Na				

1. How is the element's period related to the number of energy levels over which its electrons are spread?

2. How can you predict an element's group and period?