CHAPTER 2 LEARNING OBJECTIVES

1. Explain the significance of Rutherford's experiment.

2. Describe the composition of an atom in terms of protons, neutrons, and electrons.

3. Distinguish between precision and accuracy.

4. Determine the number of significant figures in a measured quantity.

5. Express the result of a calculation with the proper number of significant figures.

6. Write the chemical symbol for an element, having been given its mass number and atomic number.

7. Understand the definition of isotope.

8. Calculate the atomic weight (average atomic mass) of an element given the abundances and masses of its isotopes.

9. Identify the group number and period to which an element belongs.

10. Identify the names of the common groups and collections of elements in the periodic table (Figure 2.6).

11. Calculate the molecular weight and molar mass of a substance from its chemical formula.

12. Interconvert number of molecules, number of moles and mass of a substance.

Review the "In Closing" and "Key Terms" sections of Chapter 2 (page 71).