

## SECTION

CHEMICAL BONDS HOLD COMPOUNDS TOGETHER.

**2.2 Reading Study Guide B****BIG IDEA** The properties of compounds depend on their atoms and chemical bonds.**KEY CONCEPT** Chemical bonds hold compounds together.**Review**

Elements combine to form compounds. Electrons move about the nucleus in a cloud.

**Take Notes****I. Chemical bonds between atoms involve electrons. (p. 47)**

1. Fill in the detail notes for the main idea shown.

MAIN IDEA	DETAIL NOTES
1. Chemical bonds are the “glue” that hold compounds together.	A. B. C.

**II. Atoms can transfer electrons. (p. 48)**

2. Fill in the detail notes for the main idea shown.

MAIN IDEA	DETAIL NOTES
1. Atoms can transfer electrons.	A. Gaining electrons changes an atom into _____. B. Losing electrons _____.

**A–B. Forming Ionic Bonds and Names of Ionic Compounds (pp. 48–49)**

3. What is an ionic bond?

\_\_\_\_\_

4. Complete the following sentences explaining how the periodic table can help you determine the type of ions the atoms of an element will form.

The \_\_\_\_\_ located at the left of the periodic table form \_\_\_\_\_.

At the right of the periodic table, the \_\_\_\_\_ form \_\_\_\_\_. For

example, atoms of the elements in Group 1 form ions with a \_\_\_\_\_

charge. Atoms of elements in the halogen group, Group 17, form ions with a

\_\_\_\_\_ charge.

5. Explain in three steps how you would name the ionic compound with the formula  $\text{BaCl}_2$ .

1. \_\_\_\_\_

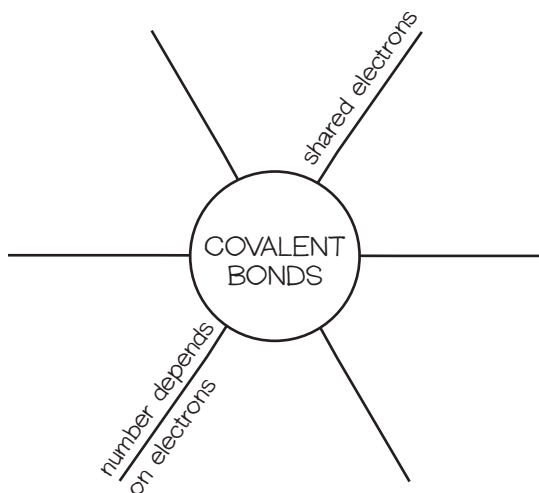
2. \_\_\_\_\_

3. \_\_\_\_\_

### III. Atoms can share electrons. (p. 50)

#### A. Forming Covalent Bonds and Polar Covalent Bonds (PP. 50–51)

6. Fill in the description wheel for *covalent bond*.



7. Explain why it is difficult to find a completely covalent compound.

\_\_\_\_\_  
\_\_\_\_\_

### IV. Chemical bonds give all materials their structures. (p. 53)

8. What kind of structure do most ionic compounds have?

\_\_\_\_\_

9. Name one thing the shape of a molecule can affect.

\_\_\_\_\_