How to Use Your Textbook

Your Roadmap for Success with *Modern Chemistry*

Get Organized

Keep a science notebook so that you are ready to take notes when your teacher reviews material in class. Keep your assignments in this notebook so that you can review them when studying for the chapter test.

STUDY TIP **Appendix B,** located in the back of the book, describes a number of Study Skills that can help you succeed in chemistry, including several approaches to note taking.

Read for Meaning

Read the **Objectives** at the beginning of each section because they will tell you what you'll need to learn. **Key Terms** are boldfaced in each chapter. Use the glossary to locate definitions quickly. After reading each chapter, turn to the **Chapter Highlights** page. Then, review the list of key terms and read the brief summaries of the chapter's main ideas. You may want to do this even before you read the chapter.

STUDY TIP If you don't understand a definition, reread the page on which the term is introduced. The surrounding text should help make the definition easier to understand.

Organic Compounds

SECTION 1

OBJECTIVES

- Explain how the structure and bonding of carbon lead to the diversity and number of organic compounds.
- Compare the use of molecular and structural formulas to represent organic compounds.
- Compare structural and geometric isomers of organic compounds.

All organic compounds contain carbon atoms. However, not all carbon-containing compounds are classified as organic. There are a few exceptions, such as Na_2CO_3, CO, and CO_2, that are considered inorganic. **Organic compounds,** then, can be defined as *covalently bonded compounds containing carbon, excluding carbonates and oxides*. **Figure 1** shows a few familiar items that contain organic compounds.

Carbon Bonding and the Diversity of Organic Compounds

The diversity of organic compounds results from the uniqueness of carbon's structure and bonding. Carbon's electronic structure allows it to bind to itself to form chains and rings, to bind covalently to other elements, and to bind to itself and other elements in different arrangements.

FIGURE 1 Aspirin, polyethylene in plastic bags, citric acid in fruit, and amino acids in animals are all examples of organic compounds.

ORGANIC CHEMISTRY 711

Be Resourceful, Use the Web

SciLinks boxes in your textbook take you to resources that you can use for science projects, reports, and research papers. Go to scilinks.org, and type in the SciLinks code to get information on a topic.

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