

## **CHAPTER 1**

### **INTRODUCTION TO CHEMISTRY AND INTRODUCTION TO ACTIVE LEARNING**

#### **Authors' Comments on Chapter 1**

Chapter 1 has three parts. The first part, entitled *Introduction to Chemistry*, is an introduction to the scientific method and the science of chemistry.

The second part, entitled *Introduction to Active Learning*, is a discussion of how to study for a chemistry course and an overview of the learning tools in the textbook. Section 1-4, *Learning How to Learn Chemistry*, emphasizes the importance of making good academic choices that will lead to success in challenging courses such as chemistry. Section 1-5, *Your Textbook*, introduces students to the array of learning tools presented in the textbook. Since our book contains many one-of-a-kind features, it is important for students to spend a few minutes at the beginning of the course learning how the book is uniquely designed to help them learn chemistry.

The third part, *A Choice*, Section 1-6, is simply three paragraphs that emphasize that one must choose to be disciplined when in a course that requires an investment of study time outside of class.

Chapter 1 is optional and can be omitted without loss of continuity, but we recommend that it be assigned in its entirety. Since the chapter is only 16 pages long and free of abstract scientific concepts, it can be studied independently in a reasonably short amount of time. If you want to spend the first day of class introducing the scientific method, the textbook, and your syllabus—the presentation slides give you a framework for doing so—then the study of Chapter 1 can be the first homework assignment. You may want to have students turn in their study plan and weekly calendar (Questions, Exercises, and Problems) at the second class meeting.

#### **Answers Only for Black-Numbered Unanswered Questions, Exercises, and Problems**

Chapter 1 has no Questions, Exercises, and Problems that have “correct answers.”

#### **Solutions for Black-Numbered Unanswered Questions, Exercises, and Problems**

The two Chapter 1 questions are designed to help set up students who have little or no experience with college science courses for success. We find that many new college students were successful in their high school science courses by studying outside of class only on the evenings before exam days. They enter college with the expectation that they are going to be in “13th grade,” where the continuation of their high school study “strategy” will be sufficient. As we point out in Section 1-4, failure to commit sufficient time outside of class is the biggest problem when it comes to learning chemistry. Developing a study plan and a weekly calendar should help students to insure that they are making an appropriate commitment to doing homework.