

To the Student

Changes in society, technology, and the world economy are occurring at increasingly faster rates. You will need to be a quick learner, critical thinker, and problem solver to succeed. You will need to be computer literate and skillful in communicating, teamwork, management, and assessment. Process-oriented guided-inquiry learning (POGIL) is a methodology that is designed to help you develop these skills.

POGIL activities are not like textbooks that you have used before. They do not provide you with information to read, memorize, and repeat on an exam. Rather they provide some representation, a model, of what is to be learned. Key questions guide your exploration of the model, unlock the information present, and reveal its significance. The key questions help you discover the relevant concepts and develop an understanding of the concepts.

Exercises then give you practice at applying these concepts in straightforward situations. They build your confidence in using your new knowledge to solve problems and answer questions. A few problems are included and your teacher will assign others. Problems are not as straightforward as the exercises. They often require the use of two or more concepts and the application of your knowledge in new contexts.

The goal is to help you learn how to process information, analyze situations by asking key questions on your own, construct your own understanding of chemistry, and develop the problem solving skills that you need to be successful in high school, college, and in your career.

You will learn the most and have the most fun if you work on these activities with other students. Discussions among members of your learning team will produce different perspectives regarding the concepts and their use in solving problems. Discussions will also help you to identify and correct misconceptions while strengthening and deepening your understanding of chemistry. Use your textbook and other references to resolve disagreements, to find answers to questions that arise, and to see examples of problem solutions. It is through your understanding of the concepts and understanding how to use them that you will be able to answer examination questions and solve real-world problems successfully.

When you are working in a learning team you should have two objectives: to understand the material and to assure that every other member of the team understands the material. Explaining ideas and helping others learn are amongst the best ways for you to deepen your understanding and knowledge and gain the insight needed to solve real-world problems.

We have found that this approach works for most students. They do better on exams, understand more about chemistry, recognize that they have become stronger learners, and have had more fun on the way.