

Review of Novare General Chemistry text

Reviewer: Carol Wells, Ph.D.

Novare *General Chemistry* is another successful text by John Mays. Lots of colorful, attractive and intriguing illustrations capture students' attention and aid in presenting ideas. Enthusiastic and captivating narration gives both the technical information as well as the historical development of ideas. The narration includes examples in everyday life to provide lots of connections for students to place and relate this new knowledge to their own experiences. The author is able to reach a range of students, those seeking basic, general knowledge in chemistry and those seeking a more serious foundation for a future science career. There are plentiful references to topics that a motivated student may pursue in more depth as he chooses. Proper scientific terminology is maintained with clear details of presentation leading to understanding, not just memorizing information.

The Novare *General Chemistry* text follows the Novare program goal of promoting deep understanding and mastery versus the 'cram-pass-forget cycle' that is pervasive in other science programs. Towards that goal, the text has several helpful features. The organization is well-thought out to provide general principles followed by detailed discussion and examples of those principles. By outlining the general principles first, the details can be meaningfully placed and hence, more easily retained by students. The book begins with an introductory chapter outlining five general principles to keep in mind throughout the course. Chemistry consists of a tremendous amount of details, so the author's efforts to provide a framework for this material is immensely helpful. Each chapter begins with general concepts and then expands with specific details. For example, when the octet rule is introduced, the background to understand the rule has been fully explained so that students are able to use this rule thoughtfully, not just as a memorized 'trick.' In addition, review problems in each chapter require students to retain material throughout the course. This is essential for the goal of mastery.

There is a homeschool version of the laboratory manual. This is helpful, comprehensive, and extremely detailed—providing suppliers, safety details and tips. However, these labs are not easily or inexpensively done in a homeschool setting. It would be best for several families to pool resources and do these labs together.

Overall, both the method and presentation in this text will provide a good, solid chemistry course for high school students.