

# Chemistry

## Chemistry Curriculum Overview

The Chemistry curriculum is designed to provide students with a detailed understanding of the interaction of matter and energy. This interaction is investigated through the use of laboratory techniques, manipulation of chemical quantities, and problem-solving applications. Scientific methodology will be employed in experimental and analytical investigations, and concepts will be illustrated with practical applications that should include examples from environmental, nuclear, organic, and biochemistry content areas.

Technology including graphing calculators, computers, and probeware will be employed where feasible. Students will understand and use safety precautions with chemicals and equipment. The curriculum emphasizes qualitative and quantitative study of substances and the changes that occur in them. Students are encouraged to share their ideas, use the language of chemistry, discuss problem-solving techniques, and communicate effectively.

There is continued focus on student growth in understanding the nature of science. This scientific view defines the idea that explanations of nature are developed and tested using observation, experimentation, models, evidence, and systematic processes. The nature of science includes the concepts that scientific explanations are based on logical thinking; are subject to rules of evidence; are consistent with observational, inferential, and experimental evidence; are open to rational critique; and are subject to refinement and change with the addition of new scientific evidence. The nature of science includes the concept that science can provide explanations about nature, can predict potential consequences of actions, but cannot be used to answer all questions.

## Adopted Instructional Resources

The honors level textbook for Chemistry I is *Modern Chemistry* (2002) published by Holt, Rinehart, and Winston (HRW). Visit the [support page](#) for Modern Chemistry for additional resources.

Advanced Chemistry I students use *Chemistry: Matter and Change* (2002) published by Glencoe/McGraw-Hill. For additional support, visit the [companion web site](#).

Students enrolled in standard Chemistry I use *World of Chemistry* published by McDougal Littell. Please visit the [ClassZone web site](#) for additional support for this textbook.

Chemistry II (Advanced Placement) students use the college level text *Chemistry: Principles and Reactions*. Visit this [informational site](#) to learn more about this textbook.