



# ACTIVE CHEMISTRY<sup>®</sup>

A full-year, NSF-funded chemistry curriculum that embraces the three-dimensional learning of the *Next Generation Science Standards* (NGSS) for ALL students.

## Three-Dimensional, Project-Based Learning

- *Active Chemistry* seamlessly integrates science and engineering practices, crosscutting concepts, and core ideas throughout the curriculum.
- Each *Active Chemistry* chapter begins with a scenario and challenge that is interesting and meaningful to students and motivates them to learn and remember the chemistry content.
- Students learn chemistry and use their knowledge creatively to develop unique solutions to their Chapter Challenges.

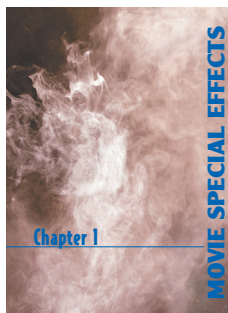
## Students Learn Like Scientists and Engineers

- Students develop important 21st century skills as they work collaboratively in groups and engage in science discourse.
- *Active Chemistry* infuses engineering into the chemistry curriculum. Students are introduced to the Engineering Design Cycle, which they use as they iteratively work towards completing the Chapter Challenge.
- *Active Chemistry* is based on research in the cognitive sciences—the research on how students learn—encapsulated in the 7E Instructional Model (Elicit, Engage, Explore, Explain, Elaborate, Evaluate, Extend).

## Total Support for Teachers

- Student Edition and a comprehensive Teacher's Edition are available in print and digital formats.
- *Active Chemistry* Learning Community (Haiku) provides teachers with resources to prepare lessons as well as share and compare with other teachers in an online community.
- Online resources include daily lesson plans, pre-quizzes, student misconceptions, differentiation strategies, as well as videos that highlight the crucial chemistry for each section and videos that familiarize teachers with lab equipment and setup.





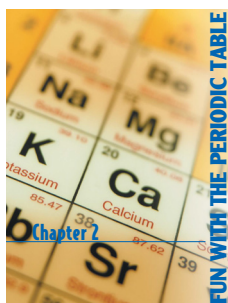
### Chapter 1: Movie Special Effects

Chapter Challenge: Students develop a movie scene that uses special effects that involve chemical concepts.



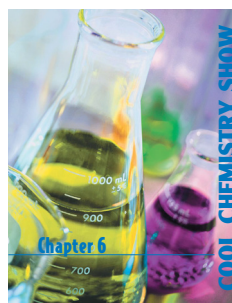
### Chapter 5: Ideal Toy

Chapter Challenge: Students create a toy that uses various chemical and/or gas principles.



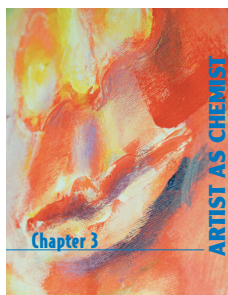
### Chapter 2: Fun with the Periodic Table

Chapter Challenge: Students develop a game to learn about and use the periodic table.



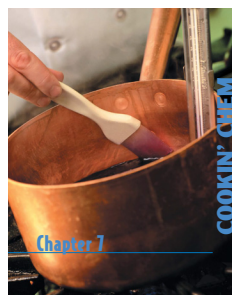
### Chapter 6: Cool Chemistry Show

Chapter Challenge: Students develop a demonstration of chemistry concepts for a grade-school audience.



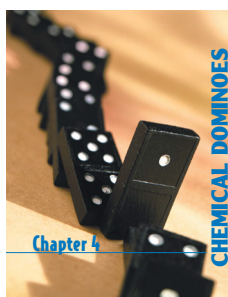
### Chapter 3: Artist as Chemist

Chapter Challenge: Students create a work of art and describe the chemistry concepts used to produce the artwork.



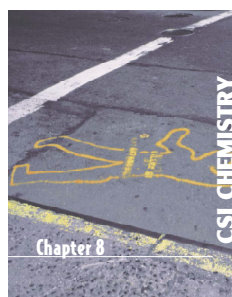
### Chapter 7: Cookin' Chem

Chapter Challenge: Students create a segment of a television cooking show that explains the chemistry behind the cooking.



### Chapter 4: Chemical Dominoes

Chapter Challenge: Students create a prototype of a "chemical-dominoes sequence" that can be sold by a toy company.



### Chapter 8: CSI Chemistry

Chapter Challenge: Students create a crime scene and prepare evidence that requires the use of at least three forensic chemistry techniques to solve the crime.