Activate Learning®

# ACTIVE PHYSICAL SCIENCE®

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

## Three-Dimensional, Project-Based Learning

- *Active Physical Science* seamlessly integrates science and engineering practices, crosscutting concepts, and core ideas throughout the curriculum.
- Each *Active Physical Science* chapter begins with a scenario and challenge that is interesting and meaningful to students and motivates them to learn and remember the physics and chemistry content.
- Students learn physics and 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 Physical Science* 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 Physical Science* 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 Teacher's Edition are available in print and digital formats.
- *Active Physical Science* provides a comprehensive Teacher's Edition and Resources: labs as part of the instructional model, physics and chemistry explanations emerging from the evidence, assessments to find out what students know, and differentiated instruction to ensure success for all students.

NSF

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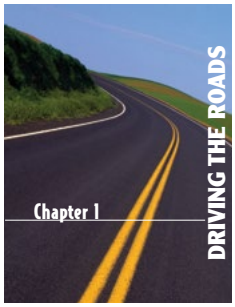
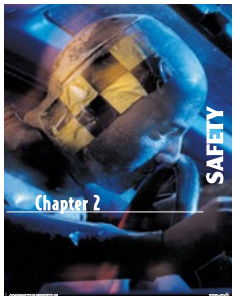


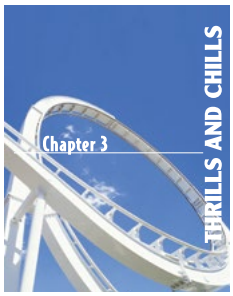

## Chapter 1:
## Driving the Roads

Chapter Challenge: Students demonstrate their knowledge of the physics of driving by making a presentation to a board of driving instructors.



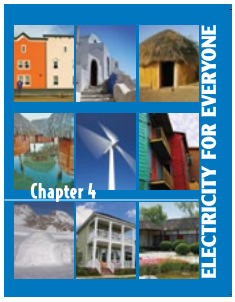

## Chapter 2:
## Safety

Chapter Challenge: Students design a safety system to protect passengers during a collision.



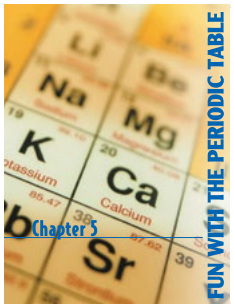

## Chapter 3:
## Thrills and Chills

Chapter Challenge: Students modify the design of a roller coaster to meet the needs of a specific group of riders.



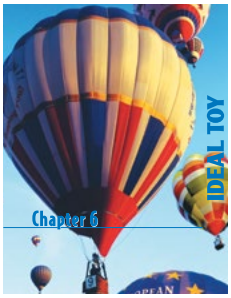

## Chapter 4:
## Electricity for Everyone

Chapter Challenge: Students design an appliance package for a family home that is powered by a wind-driven generator.



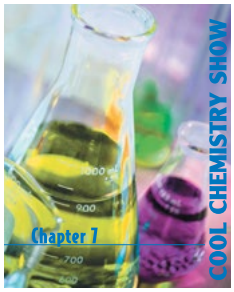

## Chapter 5:
## Fun with the Periodic Table

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




## Chapter 6:
## Ideal Toy

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




## Chapter 7:
## Cool Chemistry Show

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

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