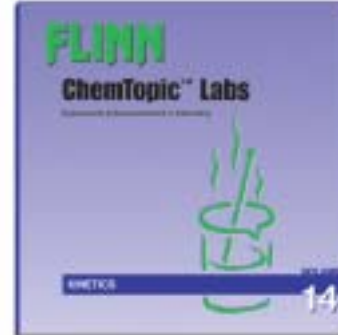


Kinetics— National Science Education Standards



Experiments and Demonstrations

Content Standards

	<i>Introduction to Reaction Rates</i>	<i>Temperature and Reaction Rates</i>	<i>The Order of Reaction</i>	<i>Kinetics of Dye Fading</i>	<i>Determining a Rate Law</i>	<i>Iodine Clock Reaction</i>	<i>Now You See It—Now You Don't</i>	<i>Suddy Kinetics</i>	<i>The Pink Catalyst</i>	<i>The Floating Catalyst</i>
Unifying Concepts and Processes										
Systems, order, and organization	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Evidence, models, and explanation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Constancy, change, and measurement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Evolution and equilibrium										
Form and function										
Science as Inquiry										
Identify questions and concepts that guide scientific investigation	✓	✓	✓	✓	✓	✓		✓		✓
Design and conduct scientific investigations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Use technology and mathematics to improve scientific investigations	✓	✓	✓	✓	✓	✓		✓		✓
Formulate and revise scientific explanations and models using logic and evidence	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Recognize and analyze alternative explanations and models							✓		✓	
Communicate and defend a scientific argument										
Understanding scientific inquiry	✓	✓	✓	✓	✓	✓		✓		✓
Physical Science										
Structure of atoms										
Structure and properties of matter	✓	✓				✓				
Chemical reactions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motions and forces										
Conservation of energy and the increase in disorder										
Interactions of energy and matter	✓	✓				✓		✓	✓	

Continued on next page

Kinetics— National Science Education Standards



Experiments and Demonstrations

Content Standards (continued)

	Introduction to Reaction Rates	Temperature and Reaction Rates	The Order of Reaction	Kinetics of Dye Fading	Determining a Rate Law	Iodine Clock Reaction	Now You See It—Now You Don't	Suddy Kinetics	The Pink Catalyst	The Floating Catalyst
Science and Technology										
Identify a problem or design an opportunity		✓								
Propose designs and choose between alternative solutions		✓								
Implement a proposed solution		✓								
Evaluate the solution and its consequences		✓								
Communicate the problem, process, and solution		✓								
Understand science and technology		✓						✓		
Science in Personal and Social Perspectives										
Personal and community health										
Population growth										
Natural resources										
Environmental quality										
Natural and human-induced hazards										
Science and technology in local, national, and global challenges										
History and Nature of Science										
Science as a human endeavor										
Nature of scientific knowledge	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Historical perspectives										