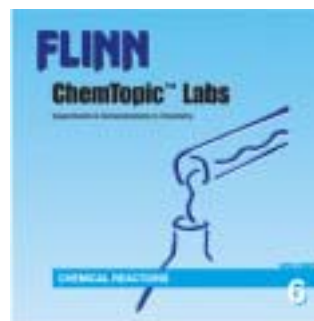


# Chemical Reactions— National Science Education Standards



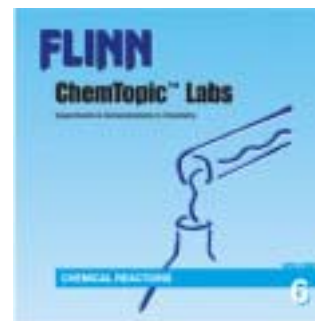
## Experiments and Demonstrations

### Content Standards

	<i>Classifying Chemical Reactions</i>	<i>Double Replacement Reactions</i>	<i>A Four-Reaction Copper Cycle</i>	<i>Chemical Reactions &amp; Qualitative Analysis</i>	<i>Chemical Reactions Primer</i>	<i>Colorful Electrolysis</i>	<i>The Chef</i>	<i>Foiled Again!</i>	<i>The Yellow and Blue Switcheroo</i>	<i>Old Foamey</i>	<i>Cool Light</i>
<b>Unifying Concepts and Processes</b>											
Systems, order, and organization	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Evidence, models, and explanation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Constancy, change, and measurement											
Evolution and equilibrium											
Form and function											
<b>Science as Inquiry</b>											
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				✓							
Understand scientific inquiry	✓	✓		✓	✓						
<b>Physical Science</b>											
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

# Chemical Reactions— National Science Education Standards



## Experiments and Demonstrations

### Content Standards (continued)

	<i>Classifying Chemical Reactions</i>	<i>Double Replacement Reactions</i>	<i>A Four-Reaction Copper Cycle</i>	<i>Chemical Reactions &amp; Qualitative Analysis Primer</i>	<i>Chemical Reactions</i>	<i>Colorful Electrolysis</i>	<i>The Chef</i>	<i>Foiled Again!</i>	<i>The Yellow and Blue Switcheroo</i>	<i>Old Foamey</i>	<i>Cool Light</i>
<b>Science and Technology</b>											
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Science in Personal and Social Perspectives</b>											
Personal and community health				✓							
Population growth											
Natural resources			✓								
Environmental quality				✓							
Natural and human-induced hazards											
Science and technology in local, national, and global challenges											
<b>History and Nature of Science</b>											
Science as a human endeavor											
Nature of scientific knowledge	✓	✓	✓	✓							
Historical perspectives											