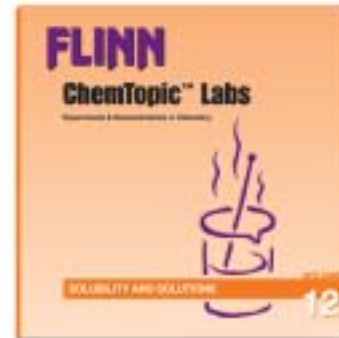


Solubility and Solutions— National Science Education Standards



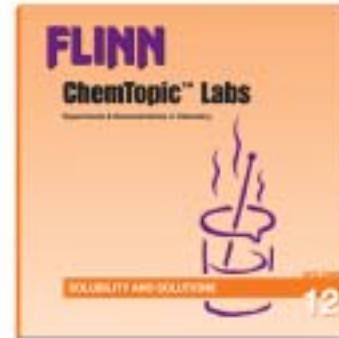
Experiments and Demonstrations

Content Standards

	<i>Factors Affecting Solution Formation</i>	<i>It's in Their Nature</i>	<i>Solubility and Temperature</i>	<i>Preparing and Diluting Solutions</i>	<i>Freezing Point Depression</i>	<i>Aloha Chemical Sunset</i>	<i>Solutions, Colloids, and Suspensions</i>	<i>Alka-Seltzer and Gas Solubility</i>	<i>Sorting Out Solutions</i>	<i>Instant Hand Warmers</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

Solubility and Solutions— National Science Education Standards



Experiments and Demonstrations

Content Standards (continued)

	Factors Affecting Solution Formation	It's in Their Nature	Solubility and Temperature	Preparing and Diluting Solutions	Freezing Point Depression	Aloha Chemical Sunset	Solutions, Colloids, and Suspensions	Alka-Seltzer and Gas Solubility	Sorting Out Solutions	Instant Hand Warmers
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										

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