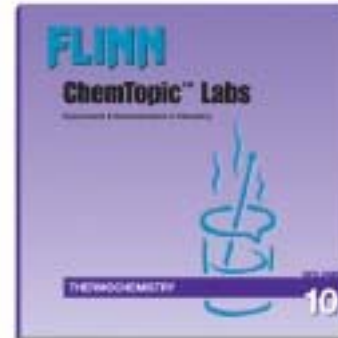


# Thermochemistry— National Science Education Standards



## Experiments and Demonstrations

### Content Standards

	Exploring Energy	Measuring Energy	Discovering Instant Cold Packs	Measuring Calories	Heat of Reaction and Hess's Law	Colorful Heat	Specific Heat	Cool Reaction	Whooosh Bottle	Flameless Ration Heaters
<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			✓							
Understanding 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

# Thermochemistry— National Science Education Standards



## Experiments and Demonstrations

### Content Standards (continued)

	Exploring Energy	Measuring Energy	Discovering Instant Cold Packs	Measuring Calories	Heat of Reaction and Hess's Law	Colorful Heat	Specific Heat	Cool Reaction	Whoosh Bottle	Flameless Ration Heaters
<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										