

Molar Relationships & Stoichiometry— National Science Education Standards



Experiments and Demonstrations

Content Standards

	<i>Who's Counting?</i>	<i>Magnesium Oxide</i>	<i>Decomposition of Sodium Chlorate</i>	<i>Mole Ratios</i>	<i>Micro Mole Rockets</i>	<i>Mole Creativity</i>	<i>How Big Is a Mole?</i>	<i>Mole Samples and Molar Mass</i>	<i>Stoichiometry Balloon Races</i>	<i>Stoichiometry and Solubility</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										

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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	✓				✓	✓				