NATIONAL SCIENCE EDUCATION STANDARDS

Investigating Solids, Liquids, and Gases with TOYS: States of Matter and Changes of State

GRADE	CATEGORY	SUB-CATEGORY	STANDARD
5-8	Physical Science	Motions And Forces	The motion of an object can be described by its position, direction of motion, and speed. That motion can be measured and represented on a graph.
5-8	Physical Science	Properties And Changes Of Properties In Matter	A substance has characteristic properties, such as density, a boiling point, and solubility, all of which are independent of the amount of the sample. A mixture of substances often can be separated into the original substances using one or more of the characteristic properties.
5-8	Physical Science	Properties And Changes Of Properties In Matter	Substances react chemically in characteristic ways with other substances to form new substances (compounds) with different characteristic properties. In chemical reactions, the total mass is conserved. Substances often are placed in categories or groups if they react in similar ways; metals is an example of such a group.
5-8	Physical Science	Transfer Of Energy	Energy is a property of many substances and is associated with heat, light, electricity, mechanical motion, sound, nuclei, and the nature of the chemical. Energy is transferred in many ways.
5-8	Physical Science	Transfer Of Energy	Heat moves in predictable ways, flowing from warmer objects to cooler ones, until both reach the same temperature.
5-8	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Communicate scientific procedures and explanations.
5-8	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Design and conduct a scientific investigation.
5-8	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Develop descriptions, explanations, predictions, and models using evidence.
5-8	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Identify questions that can be answered through scientific investigations.

5-8	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Recognize and analyze alternative explanations and predictions.
5-8	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Think critically and logically to make the relationships between evidence and explanations.
5-8	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Use appropriate tools and techniques to gather and analyze, and interpret data.