Benchmarks Grades 5-8 (M)	Mighty Currents	Han-cranked Generator	Electricity Bench	Optics Lab	Mixing Colors	Mystery Shadows	Soap Film Rainbow	Color Banner	Seasons Lab	Orrery	Coriollis Fountain	Snow Chamber	Dew Point	The Sound Lab	Patterns of Movement	Pendulum Lab	Peg and Pendulum	Lissajous' Figures	Lariat Chain	Ripple Tank	Musical Ratios	Waves on a String	MacFourier	Mobiles Lab	Pendulum Clock	Sawtooth Grapher	Stress Analyzer	Variable Length Pendulum	Vibrations and Frequencies
Physical Science (PS-M)																													
A. Properties and Changes of Properties in Matter																													
1. Investigating, measuring, and communicating the properties of different																													
substances which are independent of the amount of the substance.																													
2. Understanding that all matter is made up of particles called atoms and	X	X	X																										
that atoms of different elements are different.																													
3. Grouping substances according to similar properties and/or behavior.																													
4. Understanding that atoms and molecules are perpetually in motion.	X	X	X																										
5. Investigating the relationships among temperature, molecular motion,	X	X	X								X	X	X	X	X	X	X				X	X					X		X
phase changes, and physical properties of matter.																													
6. Investigating chemical reactions between different substances to																													
discover that new substances formed may have new physical properties																													
and do have new chemical properties.																													
7. Understanding that during a chemical reaction in a closed system, the																													
mass of the products is equal to that of the reactants.																													
8. Discovering and recording how factors such as temperature influence																													
chemical reactions.																													
9. Identifying elements and compounds found in common foods, clothing,																													
household materials, and automobiles.																													
B. Motions and Forces																													
1. Describing and graphing the motions of objects														X	X	X		X		X	X	X		X	X	X	X	X	X
2. Recognizing different forces and describing their effects (gravity, electrical,	X	X	X	X						X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
magnetic).																													
3. Understanding that, when an object is not being subjected to a force, it	X	X	X	X											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
will continue to move at a constant speed and in a straight line.																													
4. Describing how forces acting on an object will reinforce or cancel one	X	X	X	X											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
another, depending upon their direction and magnitude.																													
5. Understanding that unbalanced forces will cause changes in the speed	X	X	X	X											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
or direction of an object's motion.																													
C. Transformations of Energy.																													
1. Identifying and comparing the characteristics of different types of energy.	X	X	X	X	X	X				X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2. Understanding the different kinds of energy transformations and the fact	X	X	X	X	X	X				X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
that energy can be neither destroyed nor created.																													
3. Understanding that the sun is a major source of energy and that energy				X	X	X	X	X	X	X	X																		
arrives at the Earth's surface as light with a range of wavelengths.																													
4. Observing and describing the interactions of light and matter (reflection,				X	X	X	X	X	X	X	X																		

refraction, absorption, transmission, scattering).																															
5. Investigating and describing the movement of heat and the effects of heat in	X	X	X						X	X	X	X	X																		
objects and systems.																															
6. Describing the types of energy that can be involved, converted, or released	X	X	X																												
electrical circuits.																															
7. Understanding that energy is involved in chemical reactions.	X	X	X						X	X	X	X	X																		
8. Comparing the uses of different energy resources and their effects upon	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
the environment.																															