

## Maryland State Science Standards Correlation

		Inquiry Investigations™ Physical Science Series I - 1013060																		
Standard	Benchmark	Description	UNIT 1 THE WORLD OF PHYSICAL SCIENCE						UNIT 2 HEAT AND ENERGY					UNIT 3 LIGHT AND OPTICS					UNIT 4 ELECTRICITY	
			Exploring the Scientific Method LAB 1013080		Exploring the Science of Measurement LAB 1013082				Exploring Heat and Energy LAB 1013084					Exploring Light and Optics LAB 1013086					Exploring Electricity LAB 1013088	
			Effect of temperature on the emergence of sponge creatures	Effect of pH on the emergence of sponge creatures	The metric system (SI)	Measuring density	Measuring temperature	Measuring pH	Measuring low concentrations of water pollutants	Heat of fusion of ice	Thermal conductivity of different metals	Thermal expansion	Demonstrating radiant heat and energy	Calibration of a thermometer	Visible light spectrum	What is color?	Reflection of light	Polarized light	The laser	The electroscopes
1.0 - Skills and Processes	A. Constructing Knowledge	Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.																		
	B. Applying Evidence and Reasoning	Review data from a simple experiment, summarize the data, and construct a logical argument about the cause-and-effect relationships in the experiment.																		
	C. Communicating Scientific Information	Develop explanations that explicitly link data from investigations conducted, selected readings, and when appropriate, contributions from historical discoveries.																		
	D. Technology	Analyze, design, assemble, and troubleshoot complex systems.																		
5.0 Physics	B. Thermodynamics	Describe and cite evidence that heat can be transferred by conduction, convection, and radiation.																		
	C. Electricity and Magnetism	Cite evidence supporting that electrical energy can be produced from a variety of energy sources and can itself be transformed into almost any other form of energy.																		
		Identify and describe magnetic fields and their relationship to electric current.																		
	D. Wave interactions	Investigate and cite the rules that govern behaviors of light.																		

## Maryland State Science Standards Correlation

		Inquiry Investigations™ Physical Science Series II - 1013061																			
Standard	Benchmark	Description	UNIT 1 GRAVITY				UNIT 2 MAGNETISM				UNIT 3 PROPERTIES OF SOUND				UNIT 4 FORCES, MOTION, AND SIMPLE MACHINES						
			Exploring Gravity LAB 1013090				Exploring Magnetism LAB 1013092				Exploring Sound Waves LAB 1013094				Exploring Force and Motion LAB 1013096			Exploring Simple Machines LAB 1013098			
			Determination of the density of a solid	Learning about gravitation	Archimedes principle	Teacher demonstration - pressure	Investigating the behavior of the magnetic compass	The magnetic field of a bar magnet	Constructing an electromagnet	Electromagnetic induction	Investigating properties of sound	Interaction of sound waves	Doppler effect	Observing the properties of a wave	Investigating Newton's laws of motion	Friction	Rotational inertia	Collisions	The lever	The pulley	The inclined plane
1.0 - Skills and Processes	A. Constructing Knowledge	Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.																			
	B. Applying Evidence and Reasoning	Review data from a simple experiment, summarize the data, and construct a logical argument about the cause-and-effect relationships in the experiment.																			
	C. Communicating Scientific Information	Develop explanations that explicitly link data from investigations conducted, selected readings, and when appropriate, contributions from historical discoveries.																			
	D. Technology	Explain that complex systems require control of mechanisms.																			
5.0 - Physics	A. Mechanics	Develop an explanation of motion using the relationships among time, distance, velocity, and acceleration.																			
		Identify and relate formal ideas (Newton's Laws) about the interaction of force and motion to real world experiences.																			
		Recognize and explain that every object exerts gravitational force on every other object.																			
		Recognize and explain that energy can neither be created nor destroyed; rather it changes form or is transferred through the action of forces.																			
	B. Electricity and Magnetism	Identify and describe magnetic fields and their relationship to electric current.																			
	D. Wave Interactions	Identify and describe the relationships among the various properties of waves.																			
		Provide evidence to demonstrate the relationship among the properties of waves using sound.																			
Investigate and cite the rules that govern behaviors of light.																					