Michigan State Science Standards Correlation

Inquiry Investigations™ Physical Science Series I - 1013060

Standard Topic	Concept(s)	UNIT 1 THE WORLD OF PHYSICAL SCIENCE: Exploring the Scientific Method LAB 1013080 — Effect of temperature on the emergence of sponge creatures	UNIT 1 THE WORLD OF PHYSICAL SCIENCE: Exploring the Scientific Method LAB 1013080 — Effect of pH on the emergence of sponge creatures	UNIT 1 THE WORLD OF PHYSICAL SCIENCE: Exploring the Science of Measurement LAB 1013082 — The metric system (SI)	Measuring density	Measuring temperature	Measuring pH	Measuring low concentrations of water pollutants	UNIT 2 HEAT AND ENERGY: Exploring Heat and Energy LAB 1013084 — Heat of fusion of ice	Thermal conductivity of different metals	Thermal expansion	Demonstrating radiant heat and energy	Calibration of a thermometer	UNIT 3 LIGHT AND OPTICS: Exploring Light and Optics LAB 1013086 — Visible light spectrum	What is color?	Reflection of light	Polarized light	The laser	UNIT 4 ELECTRICITY: Exploring Electricity LAB 1013088 — The electroscope	Electrolytes	Resistors in series and parallel
Constructing New Scientific Knowledge (C.) I.1	Generate scientific questions about the world based on observation.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Design and conduct scientific investigations.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Use tools and equipment appropriate to scientific investigations.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Use metric measurement devices to provide consistency in an investigation.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Use sources of information in support of scientific investigation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Write and follow procedures in the form of step-by-step instructions, formulas, flow diagrams, and sketches.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Reflecting on Scientific Knowledge (K.) II. 1	Evaluate the strengths and weaknesses of claims, arguments, or data.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Show how common themes of science, mathematics, and technology apply in real-world contexts.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Matter and Energy (PME) IV. 1	Describe and compare objects in terms of mass, volume, and density			■	■	■	■	■													
	Explain when length, mass, weight, density, area, volume or temperature are appropriate to describe the properties of an object or substance.			■	■	■	■	■													
	Construct simple circuits and explain how they work in terms of the flow of current.																		■	■	■
	Investigate electrical devices and explain how they work, using instructions and appropriate safety precautions.																		■	■	■
Changes in Matter (PCM) IV. 2	Describe common physical changes in matter, evaporation, condensation, sublimation, thermal expansion, and contraction.								■	■	■	■	■								
	Describe common energy transformations in everyday situations.								■	■	■	■	■								
Motion of Objects (PMO) IV. 3	Describe the non-contact forces exerted by magnets, electrically charged objects, and gravity.																		■	■	■
	Use electric currents to create magnetic fields, and explain applications of this principle.																		■	■	■
Waves and Virbations (PWV) IV. 4	Explain how light is required to see objects.													■	■	■	■	■			
	Describe ways in which light interacts with matter.													■	■	■	■	■			

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Michigan State Science Standards Correlation

Inquiry Investigations™ Physical Science Series II - 1013061

Standard Topic	Concept(s)	UNIT 1 GRAVITY: Exploring Gravity LAB 1013090				UNIT 2 MAGNETISM: Exploring Magnetism LAB 1013092				UNIT 3 PROPERTIES OF SOUND: Exploring Sound Waves LAB 1013094				UNIT 4 FORCES, MOTION, AND SIMPLE MACHINES: 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
Constructing New Scientific Knowledge (C.) I.1	Generate scientific questions about the world based on observation.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Design and conduct scientific investigations.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Use tools and equipment appropriate to scientific investigations.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Use metric measurement devices to provide consistency in an investigation.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Use sources of information in support of scientific investigation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Write and follow procedures in the form of step-by-step instructions, formulas, flow diagrams, and sketches.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Reflecting on Scientific Knowledge (R.) II. 1	Evaluate the strengths and weaknesses of claims, arguments, or data.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Show how common themes of science, mathematics, and technology apply in real-world contexts.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Matter and Energy (PME) IV. 1	Describe and compare objects in terms of mass, volume, and density	■	■	■	■															
Changes in Matter (PCM) IV. 2	Describe common energy transformations in everyday situations.									■	■	■	■	■	■	■	■	■	■	■
Motion of Objects (PMO) IV. 3	Qualitatively describe and compare motion in two dimensions.													■	■	■	■	■	■	■
	Relate motion of objects to unbalanced forces in two dimensions.					■	■	■	■					■	■	■	■	■	■	■
	Describe the non-contact forces exerted by magnets, electrically charged objects, and gravity.					■	■	■	■											
	Use electric currents to create magnetic fields, and explain applications of this principle.					■	■	■	■											
	Design strategies for moving objects by application of forces, including the use of simple machines.													■	■	■	■	■	■	■
Waves and Vibrations (PWV) IV. 4	Explain how sound travels through different media									■	■	■	■							
	Explain how echoes occur and how they are used.									■	■	■	■							
	Explain how light is required to see objects.									■	■	■	■							
	Describe ways in which light interacts with matter.									■	■	■	■							
	Describe the motion of vibrating objects.									■	■	■	■							

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