

**Arizona State Science Standards Correlation**

Standard Topic	Concept	Standard #	Performance Objective	Inquiry Investigations™ Physical Science Series I																	
				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	Electrolytes	Resistors in series and parallel		
Science as Inquiry	Propose solutions to biological and theoretical problems and synthesizing and evaluating information gained from scientific investigations.	1SC-P1.P01	Evaluate scientific information for relevance to a given problem.																		
		1SC-P1.P02	Propose solutions to a problem, based on information gained from scientific investigations.																		
	Compare observations of the real world to observations of a constructed model	1SC-P2.P01	Assess the capability of a model to represent a "real world" scenario.																		
		1SC-P3.P01	Analyze reports of scientific studies for elements of experimental design.																		
			1SC-P3.P02	Compare conclusions to original hypotheses																	
	Analyze and evaluate reports of scientific studies	1SC-P3.P03	Evaluate validity of conclusions.																		
		1SC-P4.P01	Design an appropriate protocol (written plan of action) for the investigation of a scientific problem.																		
			1SC-P4.P02	Justify the protocol in terms of the elements of experimental design.																	
	Apply the concepts of equilibrium, function to a variety of phenomena	1SC-P5.P01	Predict the effects of various factors on the equilibrium of a system.																		
		1SC-P6.P01	Construct a researchable question.																		
			1SC-P6.P02	Employ a research design that incorporates a scientific method to carry out an experiment.																	
	Identify and refine a researchable question, conduct the experiment, and analyze data, state and discuss findings.	1SC-P6.P03	Analyze experimental data.																		
1SC-P6.P04		Communicate experimental findings to others.																			
Identify and describe key factors that affect the development and acceptance of scientific thought		2SC-P1.P01	Define key factors that affect the development of scientific thought.																		
	2SC-P1.P02	Describe how different key factors affect the development and acceptance of scientific thought.																			
History and Nature of Science	Explain scientific innovations can challenge accepted ideas	2SC-P2.P01	Describe how an accepted idea could be challenged by scientific innovation.																		
		2SC-P5.P01	Define theory, law, and fact.																		
	2SC-P5.P02		Describe relationships among theories, laws, and fact.																		
	2SC-P5.P03	Explain how theories, laws, and facts are used to answer specific questions.																			
Analyze evidence that supports past scientific theories about a specific topic	2SC-P6.P01	Distinguish between evidence which supports a given scientific theory and evidence which does not support the theory.																			

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Personal and Social Perspectives in Science and Technology	Apply scientific thought processes and procedures to personal and social issues	3SC-P1.P01	Apply scientific thought processes ok skepticism, empiricism, objectivity, and logic seek a solution to personal and social issues.																			
		3SC-P1.P02	Apply scientific method to the solution of personal and social issues.																			
	Propose and test, using computer software or common materials, a solution to an existing problem; or design a product to meet a need, using a model or simulation	3SC-P2.P01	Describe a problem or need.																			
		3SC-P2.P02	Propose a solution to the problem or design a product to meet that need.																			
		3SC-P2.P03	Design a method of testing the solution or design a model or simulation to test the product.																			
		3SC-P2.P04	Carry out the test of the solution or product.																			
		3SC-P2.P05	Evaluate the test results.																			
Physical Science	Predict chemical and physical properties of substances	5SC-P1.P02	Determine physical and chemical properties of a substance through observation, measurement, and experimentation.																			
	Identify, measure, calculate, and analyze qualitative and quantitative relationships associated with energy forms and energy transfer or transformation	5SC-P3.P01	Identify qualitative and quantitative relationships associated with energy.																			
		5SC-P3.P02	Measure quantitative relationships associated with energy																			
		5SC-P3.P03	Calculate quantitative relationships associated with energy.																			
	Describe and explain physical interactions of matter and energy, using conceptual models	5SC-P6.P01	Demonstrate the use of conceptual models in science.																			
		5SC-P6.P02	Describe physical interactions of matter and energy.																			
		5SC-P6.P03	Justify the validity of known conceptual models applied to physical phenomena.																			
	Understand the 1st and 2nd Law of Thermodynamics	5SC-P8.P01	Use the 1st Law of Thermodynamics to explain the energy changes in a physical system.																			

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Standard Topic	Concept	Standard #	Performance Objective	Inquiry Investigations™ Physical Science Series II																	
				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
Science as Inquiry	Propose solutions to practical and theoretical problems by synthesizing and evaluating information gained from scientific investigations.	1SC-P1.P01	Evaluate scientific information for relevance to a given problem.																		
		1SC-P1.P02	Propose solutions to a problem, based on information gained from scientific investigations.																		
	Compare observations of the real world to observations of a constructed model	1SC-P2.P01	Assess the capability of a model to represent a "real world" scenario.																		
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	Analyze and evaluate reports of scientific studies	1SC-P3.P03	Evaluate validity of conclusions.																		
		Create and defend a written plan of action for a scientific investigation	1SC-P4.P01	Design an appropriate protocol (written plan of action) for the investigation of a scientific problem.																	
			1SC-P4.P02	Justify the protocol in terms of the elements of experimental design.																	
	Identify and refine a researchable question, conduct the experiment, collect and analyze data, share and discuss findings.	1SC-P6.P01	Construct a researchable question.																		
		1SC-P6.P03	Analyze experimental data.																		
1SC-P6.P04		Communicate experimental findings to others.																			
History and Nature of Science	Explain how scientific innovations can challenge accepted ideas	2SC-P2.P01	Describe how an accepted idea could be challenged by scientific innovation.																		
	Explain the impact of society of major scientific developments	2SC-P3.P02	Explain how major scientific developments in pure and applied science have affected, or could affect society.																		
	Analyze evidence that supports past and current scientific theories about a specific topic	2SC-P6.P01	Distinguish between evidence which supports a given scientific theory and evidence which does not support the theory.																		

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				Personal and Social Perspectives in Science and Technology	Apply scientific thought processes and procedures to personal and social issues	3SC-P1.P01	Apply scientific thought processes of skepticism, empiricism, objectivity, and logic seek a solution to personal and social issues.															
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Physical Science	Identify, measure, calculate, and analyze qualitative and quantitative relationships associated with energy forms and energy transfer or transformation	5SC-P3.P01	Identify qualitative and quantitative relationships associated with energy.																			
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	Describe and explain physical interactions of matter and energy, using conceptual models	5SC-P6.P01	Demonstrate the use of conceptual models in science.																			
		5SC-P6.P02	Describe physical interactions of matter and energy.																			
Demonstrate the understanding of gravitation as a universal force that each mass exerts on any other mass	5SC-P7.P01	Use the universal law of gravitation to predict how the gravity force changes with a change of distance and/or mass.																				