IES Correlations to Arizona
Grades 6-8 Earth Science Standards

"XX" Indepth coverage of concept in student edition "X" Coverage in student edition and/or Teacher Edition supports the development of the concept	Climate and Weather	Our Dynamic Planet	Energy Resources	Fossils	Materials and Minerals	Oceans	Rocks and Landforms	Soil	Water as a Resource
STANDARD 1: SCIENCE AS INQUIRY: Students understand and use the processes of scientific investigation and scientific ways of knowing. They are able to design,									
1SC-E1. Identify a question, formulate a hypothesis, control and manipulate variables, devise experiments, predict outcomes, compare and analyze results, and									
PO 1. Design an experiment using a scientific method	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 2. Conduct an experiment using a scientific method	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 3. Analyze the results of an experiment	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 4. Defend conclusions drawn from the analysis	XX	XX	XX	XX	XX	XX	XX	XX	XX
1SC-E2. Create a model (e.g., a computer simulation, a stream table) to predict change									
PO 1. Construct a model that demonstrates change within a system	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 2. Describe variables that cause change	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 3. Explain cause and effect of variables within a system	XX	XX	XX	XX	XX	XX	XX	XX	XX
SC-E3. Organize and present data gathered from their own experiences, using appropriate mathematical analyses and graphical representations									
PO 1. Construct a representation of data (e.g., histogram, stem-and-leaf plot, scatter plot, circle graph, flow chart)	XX	X	XX	XX	XX	X	X	XX	XX
PO 2. Interpret patterns in collected data	XX	XX	XX	XX	XX	XX	X	XX	XX
1SC-E4. Identify and refine questions from previous investigations									
PO 1. Analyze the results of previous investigations	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 2. Refine hypotheses from a previous investigation	XX	XX	XX	XX	XX	XX	XX	XX	XX
1SC-E5. Analyze the processes, parts and subsystems of a bicycle, a clock or other mechanical or electrical device									
PO 1. Explain the interaction among parts within mechanical or electrical devices			X						
PO 2. Analyze the processes that operate within a mechanical or electrical device			X						
1SC-E6. Analyze scientific reports from magazines, television or other media									
PO 1. Evaluate information for accuracy, logic, bias and impact	X	X	X	X	X	X	X	X	X
STANDARD 2: HISTORY AND NATURE OF SCIENCE: Students understand the nature of scientific ways of thinking. Students understand that scientific investigation									
2SC-E1. Identify major milestones in science that have revolutionized the thinking of the time									
PO 1. Describe the effects of major scientific events on society	X	X	X	X		X			
PO 2. Describe a recent scientific event that has impacted the quality of life	X	X	X	X	X	X	X	X	X
2SC-E2. Describe how science and technology are interrelated									
PO 1. Describe a technological discovery that influences science	X		XX		XX	X			X
PO 2. Describe a scientific discovery that influences technology	X	X	X		XX	X			
PO 3. Determine scientific processes involved in a technological advancement	X	X	X		X	X			
2SC-E3. Provide different explanations for a phenomenon; defend and refute the explanations									
PO 1. Analyze different theories to explain a phenomenon	X	XX	X	XX	X	XX	X	X	X

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PO 2. Defend or refute the explanation of a phenomenon	XX	XX	XX	XX	XX	XX	XX	XX	XX
2SC-E4. Identify characteristic of scientific ways of thinking									
PO 1. Describe the following scientific processes: observing, communicating, comparing, organizing, relating, inferring and applying	XX	XX	XX	XX	XX	XX	XX	XX	XX
2SC-E5. Explain how scientific theory, hypothesis generation and experimentation are interrelated									
PO 1. Describe the relationship between theory and hypotheses	X	XX	X	XX	XX	X	X	X	X
PO 2. Describe how experimental procedures can be formulated to test a hypothesis	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 3. Explain how experimental results may affect a hypothesis and a theory	XX	XX	XX	XX	XX	XX	XX	XX	XX
2SC-E6. Demonstrate how Science is an ongoing process of gathering and evaluating information, assessing evidence for and against theories and hypotheses,									
PO 1. Compare and contrast the evidence of a hypothesis	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 2. Compare and contrast evidence of a theory	X	XX	X	XX	X	X	X	X	X
PO 3. Analyze a hypothesis	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 4. Analyze a theory		XX		XX					
STANDARD 3: PERSONAL AND SOCIAL PERSPECTIVES IN SCIENCE AND TECHNOLOGY: Students understand the impact of science on human activity and									
3SC-E1. Recognize how scientific knowledge, thinking processes and skills are used in a great variety of careers									
PO 1. Explain how scientific knowledge, thinking processes and skills are used in a great variety of careers	X	X	X	X	X	X	X	X	X
3SC-E2. Develop and use a systematic approach to analyze the risks associated with natural and biological hazards									
PO 1. Analyze the risk factors associated with natural and biological hazards	XX	XX	X		XX	X		X	XX
3SC-E3. Identify a specific need and propose a solution or product that addresses this need, taking into consideration various factors									
PO 1. Design a solution or product that addresses a need and considers the factors of an environmental or human problem	X		XX		XX		X	XX	X
3SC-E4. Implement a proposed solution or design and evaluate its merit									
PO 1. Apply a proposed solution to a problem.	XX	XX	XX	XX	XX	XX	XX	XX	XX
PO 2. Evaluate the merit of a proposed solution	X	X	X	X	XX	X	X	XX	X
STANDARD 6: EARTH AND SPACE SCIENCE: Students understand the composition, formative processes, and history of the earth, the solar system and the universe.									
6SC-E1. Describe and model the motion of Earth in relation to the Sun, including the concepts of day, night, season and year									
PO 1. Explain the motion of Earth in relation to the Sun, including the concepts of day, night, season and year									
6SC-E2. Describe common objects in the solar system and explain their relationships									
PO 1. Describe common objects in the solar system galaxy and the universe									
PO 2. Explain the relationship between common objects in the solar system galaxy and the universe									
6SC-E3. Describe the composition (including the formation of minerals, rocks and soil) and the structure of the Earth									

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PO 1. Explain the processes involved in the formation of the earth's structure		XX				X			
6SC-E4. Provide evidence of how life and environmental conditions have changed									
PO 1. Compare and contrast the life and environmental conditions within geological time periods		**XX**		**XX**			**X**		
6SC-E5. Explain how Earth processes seen today, including erosion, movement of lithospheric plates, and changes in atmospheric composition, are similar to those									
PO 1. Interpret evidence that erosion, plate movement and changes in atmospheric composition as seen today also occurred in the past		XX		X		X	X		
6SC-E6. Describe the distribution and circulation of the world's water through ocean currents, glaciers, rivers, ground water and atmosphere									
PO 1. Describe the role water plays within the operation of the Earth	XX	X	X	X		XX	X	X	XX
PO 2. Describe the movement of water on the Earth	XX	X				XX	X	X	XX
6SC-E7. Describe the composition and physical characteristics (including currents, waves, tides and features of the ocean floor) of the Earth's bodies of water									
PO 1. Describe the types of bodies of water and their physical characteristics						**XX**			**X**
PO 2. Describe the chemical characteristics of salt water and fresh water						**XX**			**X**
PO 3. Describe the physical characteristics of salt water and fresh water						**XX**			**X**
6SC-E8. Describe and model large-scale and local weather systems									
PO 1. Create a weather system model	**XX**								
PO 2. Describe large-scale and local weather systems	**XX**					**X**			
6SC-E9. Describe the composition, properties and structure of the atmosphere									
PO 1. Create a model of the structure of the atmosphere	**X**								
6SC-E10. Explain how technology has impacted both earth and space science									
PO 1. Describe some technological advances that have impacted both Earth and space science	**XX**	**XX**	**X**	**X**	**XX**	**X**	**XX**	**X**	**X**