

APPENDIX A.

ARIZONA STATE EDUCATION STANDARDS

Standard	Proficiency	Unit and Lesson														
		I-1	I-2	I-3	I-4	I-5	II-1	II-2	II-3	II-4	III-1	III-2	III-3	IV-1	IV-2	
1SC-P1	Propose solutions to practical and theoretical problems by synthesizing and evaluating information gained from scientific investigation.											✓	✓			✓
1SC-P2	Compare observations of the real world to observations of a constructed model.		✓										✓			
1SC-P4	Create and defend a written plan of action for a scientific investigation.															✓
1SC-D3	Interview science professional (e.g., scientists, philosophers of science) to understand how they view science and formally report results to peers, teachers, and others.													✓	✓	
3SC-P1	Apply scientific thought processes and procedures to personal and social issues.											✓		✓	✓	✓
3SC-P2	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-P4	Identify and describe the basic processes of the natural ecosystems and how these processes affect, and are affected by humans.	✓			✓	✓								✓	✓	
3SC-P5	Describe and explain factors that affect population size and growth (e.g. birth and death rates, quality of environment, disease, education).							✓	✓	✓						
3SC-D1	Explore the scientific and technological aspects of contemporary problems; analyze and evaluate proposed solutions.											✓		✓	✓	✓
4SC-P1	Use and construct a variety of classification systems, including evolutionary relationships.					✓										
4SC-P4	Describe and explain the cycling of matter and flow of energy throughout the ecosystem's living and non-living components.			✓		✓										
4SC-P6	Describe and explain how the environment can affect the number of species and the diversity of species in an environment.								✓				✓	✓		

		I-1	I-2	I-3	I-4	I-5	II-1	II-2	II-3	II-4	III-1	III-2	III-3	IV-1	IV-2
4SC-P10	Demonstrate an understanding of the theory of evolution by natural selection as a consequence of (1) the potential for a species to increase its numbers, (2) the genetic variability of offspring due to mutation and recombination of genes, (3) a finite supply of the resources required for life, and (4) the ensuring selection by the environment of those offspring better able to survive and leave offspring.							✓	✓	✓					
5SC-P1	Predict chemical and physical properties of substances (e.g., color, solubility, chemical reactivity, melting point, boiling point).											✓			
5SC-P3	Identify, measure, calculate, and analyze qualitative and quantitative relationships associated with energy forms and energy transfer or transformation (e.g., changes in temperature, velocity, potential energy, kinetic energy, conduction, convection, radiation).				✓										
6SC-P5	Identify, investigate and predict the factors that influence the quality of water and how it can be reused, recycled, and conserved											✓	✓		
6SC-P6	Identify and compare the interactions between water and other earth systems including the biosphere, lithosphere and atmosphere.				✓							✓			
6SC-P7	Investigate, analyze and evaluate the factors that may influence weather; describe their effects on the environment and daily activities on earth.		✓	✓									✓		

APPENDIX A

TOHONO O’ODHAM NATION EDUCATION STANDARDS

Standard	Proficiency	Unit and Lesson														
		I-1	I-2	I-3	I-4	I-5	II-1	II-2	II-3	II-4	III-1	III-2	III-3	IV-1	IV-2	
A.2.8	Develop an awareness of the need for conservation of human and natural resources.	✓			✓							✓		✓	✓	✓
A.4.3	Listening to oral traditions such as O’odham stories, legends, songs, taking into consideration seasonal restrictions.					✓	✓					✓				
A.4.3	Using oral expression both in O’odham and English based on the student’s experiences and surroundings.	✓										✓		✓		✓
A.5.3	Figuring for unknown perimeter and area of land such as for gardening.												✓			
A.5.3	Measuring for distance, at school or village projects such as for runs and walks.		✓										✓			
A.6.3	Studying and observing ecosystems in our environment such as water conservation, mining, animal and plant life.			✓	✓	✓	✓					✓	✓			
A.6.3	Reinforcing science concepts through O’odham Legends on stars, clouds, animals, and plants, taking in consideration seasonal restrictions.					✓	✓									
A.6.3	Identifying plants native to the Tohono O’odham reservation including their medicinal/utalitarian uses. Sensitivity to cultural traditions in regards to dissection will be observed.					✓	✓									
A.7.3	The study and use of O’odham publications and media such as Desert Voices, student publications through schol newsletters, issues affecting Indian Nations, Native American newsletters such as Papago Runner and the Eagle Free Press.														✓	✓
A.7.3	The study of geography in relation to villages, districts, reservation and other native American Indian nations with an emphasis on the relationship of the Tohono O’odham community to state, nation, and the world.		✓									✓				
A.7.3	The study of different cultures and identifying similarities and differences between O’odham culture and other cultures.										✓					
A.10.3	Using online procedures with the use of a modem.															✓
A.11	Traditional gardening/farming practices and methods. Locally adapted crips and vegetables. History of O’odham farming and gardening. Awareness of natural resource conservation. Livestock health.											✓		✓	✓	✓

		I-1	I-2	I-3	I-4	I-5	II-1	II-2	II-3	II-4	III-1	III-2	III-3	IV-1	IV-2
B.7.2	Each school shall have a planned program to utilize community resources including elders, grandparents and parents in the instructional learning process.					✓	✓			✓	✓		✓	✓	✓