PRESCOTT UNIFIED SCHOOL DISTRICT
District Instructional Guide
Date Revised 6/1/15

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Grade Level: 4th	Subject: Science	Time:	Core Text: Pearson Science

Time	Strand	Concept	Skills (Verbs)	Standards	Assessments
Q1-4	1: Inquiry Process	1: Observations, Questions, and Hypotheses	● Differentiate inferences from observations. ● Formulate a relevant question through observations that can be tested by an investigation. ● Formulate predictions in the realm of science based on observed cause and effect relationships. ● Locate information (e.g., book, article, website) related to an investigation.	S1C1PO1 S1C1PO2 S1C1PO3 S1C1PO4	
		2: Scientific Testing (Investigating and Modeling)	● Demonstrate safe behavior and appropriate procedures (e.g., use and care of technology, materials, organisms) in all science inquiry. ● Plan a simple investigation that identifies the variables to be controlled. ● Conduct controlled investigations (e.g., related to erosion, plant life cycles, weather, magnetism) in life, physical, and Earth and space sciences. ● Measure using appropriate tools (e.g., ruler, scale, balance) and units of measure (i.e., metric, U.S. customary). ● Record data in an organized and appropriate format (e.g., t-chart, table, list,	S1C2PO1 S1C2PO2 S1C2PO3 S1C2PO4 S1C2PO5	

			written log).		
		3: Analysis and Conclusions	● Analyze data obtained in a scientific investigation to identify trends. ● Formulate conclusions based upon identified trends in data. ● Determine that data collected is consistent with the formulated question. ● Determine whether the data supports the prediction for an investigation. ● Develop new questions and predictions based upon the data collected in the investigation.	S1C3PO1 S1C3PO2 S1C3PO3 S1C3PO4 S1C3PO5	
		4: Communication	● Communicate verbally or in writing the results of an inquiry. ● Choose an appropriate graphic representation for collected data: • bar graph • line graph • Venn diagram • model ● Communicate with other groups or individuals to compare the results of a common investigation.	S1C4PO1 S1C4PO2 S1C4PO3	
	2: History and Nature of Science	1: History of Science as a Human Endeavor	● Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations ● Describe science-related career opportunities.	S2C1PO1 S2C1PO2	
		2: Nature of Scientific Knowledge	● Explain the role of experimentation in scientific inquiry. ● Describe the interaction of components in a	S2C2PO1 S2C2PO2 S2C2PO3	

			system (e.g., flashlight, radio). ● Explain various ways scientists generate ideas (e.g., observation, experiment, collaboration, theoretical and mathematical models).		
Q1	6: Earth and Space Science	2: Earth's Processes and Systems	● Identify the Earth processes that cause erosion. ● Describe how currents and wind cause erosion and land changes. ● Describe the role that water plays in the following processes that alter the Earth's surface features: • erosion • deposition • weathering ● Compare rapid and slow processes that change the Earth's surface, including: • rapid – earthquakes, volcanoes, floods • slow – wind, weathering ● Identify the Earth events that cause changes in atmospheric conditions (e.g., volcanic eruptions, forest fires). ● Analyze evidence that indicates life and environmental conditions have changed (e.g., tree rings, fish fossils in desert regions, ice cores).	S6C2PO1 S6C2PO2 S6C2PO3 S6C2PO4 S6C2PO5 S6C2PO6	
		3: Changes in the Earth and Sky	● Identify the sources of water within an environment (e.g., ground water, surface water, atmospheric water, glaciers). ● Describe the distribution of water on the Earth's surface. ● Differentiate between weather and climate	S6C3PO1 S6C3PO2 S6C3PO3 S6C3PO4 S6C3PO5 S6C3PO6	

			as they relate to the southwestern United States. ● Measure changes in weather (e.g., precipitation, wind speed, barometric pressure). ● Interpret the symbols on a weather map or chart to identify the following: • temperatures • fronts • precipitation ● Compare weather conditions in various locations (e.g., regions of Arizona, various U.S. cities, coastal vs. interior geographical regions)		
Q2	4:Life Science	1: Characteristics of Organisms	● Compare structures in plants (e.g., roots, stems, leaves, flowers) and animals (e.g., muscles, bones, nerves) that serve different functions in growth and survival. ● Classify animals by identifiable group characteristics: • vertebrates – mammals, birds, fish, reptiles, amphibians • invertebrates – insects, arachnids	S4C1PO1 S4C1PO2	
		3: Organisms and Environments	● Describe ways various resources (e.g., air, water, plants, animals, soil) are utilized to meet the needs of a population. ● Differentiate renewable resources from nonrenewable resources. ● Analyze the effect that limited resources (e.g., natural gas, minerals) may have on an environment. ● Describe ways in which resources can be conserved (e.g., by reducing, reusing, recycling, finding substitutes).	S4C3PO1 S4C3PO2 S4C3PO3 S4C3PO4	

		4: Diversity, Adaptation, and Behavior	● Recognize that successful characteristics of populations are inherited traits that are favorable in a particular environment. ● Give examples of adaptations that allow plants and animals to survive. • camouflage – horned lizards, coyotes • mimicry – Monarch and Viceroy butterflies • physical – cactus spines • mutualism – species of acacia that harbor ants, which repel other harmful insects	S4C4PO1 S4C4PO2	
Q3	5: Physical Science	3: Energy and Magnetism	● Demonstrate that electricity flowing in circuits can produce light, heat, sound, and magnetic effects. ● Construct series and parallel electric circuits. ● Explain the purpose of conductors and insulators in various practical applications. ● Investigate the characteristics of magnets (e.g., opposite poles attract, like poles repel, the force between two magnet poles depends on the distance between them). ● State cause and effect relationships between magnets and circuitry.	S5C3PO1 S5C3PO2 S5C3PO3 S5C3PO4 S5C3PO5	
Q4	3: Science in Personal and Social Perspectives	1: Changes in Environments	● Describe how natural events and human activities have positive and negative impacts on environments (e.g., fire, floods, pollution, dams). ● Evaluate the consequences of environmental occurrences that happen either rapidly (e.g., fire, flood, tornado) or over a long period of time (e.g., drought, melting ice caps, the greenhouse effect, erosion).	S3C1PO1 S3C1PO2	
		2: Science and	● Describe how science and technology (e.g.,	S3C2PO1	

		Technology in Society	computers, air conditioning, medicine) have improved the lives of many people. ● Describe benefits (e.g., easy communications, rapid transportation) and risks (e.g., pollution, destruction of natural resources) related to the use of technology. ● Design and construct a technological solution to a common problem or need using common materials.	S3C2PO2 S3C2PO3	