

Quarter					<i>Concepts and Skills</i>	Instructional Shifts						
1	2	3	4			Lab investiga- tions	Close Read Strategy	Tier II Vocab	Text Dependent Questions	Evidence Based	Writing Element	Speaking Element
					SR	<i>Science Investigation and Reasoning</i>						
					SR.A	<i>The student conducts classroom and outdoor investigations following home and safety procedures and uses environmentally appropriate and ethical practices</i>						
					1	Demonstrate safe practices in the Texas Safety standards during classroom and outdoor investigations						
					2	Make informed choices in the use and conservation of natural resources by recycling or reusing materials such as paper, aluminum cans, and plastics						
					SR.B	<i>Students use scientific inquiry methods during laboratory and outdoor investigations</i>						
					1	Plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment of technology to answer his/her questions.						
					2	Collect and record data by observing and measuring, using the metric system, and using descriptive words, and numerals such as labeled drawings, writing, and concept maps						

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				3	Construct simple tables, charts, bar graphs and maps using tools and current technology to organize, examine, and evaluate data.							
				4	Analyze data and interpret patterns to construct reasonable explanations from data that can be observed and measured.							
				5	Perform repeated investigations to increase the reliability of results							
				6	Collect record and analyze information using							
				6a	Microscopes							
				6b	Camera							
				6c	Computers							
				6d	Hand lenses							
				6e	Metric rulers							
				6f	Celsius thermometers							
				6g	Wind vanes							
				6h	Rain gauges							
				6i	Pan Balances							
				6j	Graduated cylinders							
				6k	Beakers							
				6l	Spring scales							
				6m	Hot plates							
				6n	Meter sticks							
				6o	Compasses							
				6p	Magnets							
				6q	Collecting nets							
				6r	Notebooks							
				6s	Sun, Earth, and Moon system models							
				6t	Timing devices, clocks and stopwatches							

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					6u	Materials to support observations of habitats of organisms such as terrariums and aquariums						
					7	Use Safety equipment as appropriate, including safety goggles and gloves						
					ME	<i>Matter and Energy</i>						
					1	Measure, test, and record physical properties of matter, including temperature, mass, magnetism, and the ability to sink or float						
					2	Describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container						
					3	Predict, observe and record changes in the state of matter caused by heating or cooling						
					4	Explore and recognize that a mixture is created when two materials are combined such as gravel and sand and metal and plastic paper clips.						
					FME	<i>Force, Motion and Energy</i>						
					1	Explore different forms of energy, including mechanical, light, sound, and heat/thermal in everyday life.						

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					2	Demonstrate and observe how position and motion can be changed by pushing and pulling objects to show work being done such as swings balls, pulleys, and wagons.						
					2a	a. Plan and conduct investigations to provide evidence of the effects of balanced and unbalanced forces on the motion of an object (i.e. an unbalance force on one side of a box can mke it move and balanced forces pushing on a box from opposite sides will not produce any motion) (PS2-A).						
					2b	b. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion (i.e. a child swinging, a ball rolling back and forth in a space) (PS2-B).						
					3	Observe forces such as magnetism and gravity acting on objects.						
					3a	a. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other (i.e. electric force-the force on hair from and electrically charged balloon; magnetic force-the force between two permanent magnets) (PS2-C).						

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					ES	<i>Earth and Space</i>						
				1	Observe, measure, record, and compare day to day weather changes in different locations at the same time that include air temperature, wind direction, and precipitation (ESS2-1).							
				1a	a. Research and gather information to describe climates in different regions of the State, nation, world (ESS2-2).							
				1b	b. State and explain the merit of a design solutiion that reduces the impacts of a weather-related hazard (i.e. a levee, a seawall) (ESS3-1).							
				2	Describe and illustrate the Sun as a star composed of gases that provides light and heat energy for the water cycles							
				3	Construct models that demonstrate the relationship of the Sun, Earth, and Moon, including orbits and positions.							
				4	Identify the planets in Earth’s solar system and their position in relations to the Sun							
					OE	<i>Organisms and Environments</i>						
				1	Observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem.							

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				2	Identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond or bees from a field.							
				3	Describe environmental habitats and environmental changes such as floods and droughts where some organisms thrive and others perish or move to new locations (LS4-C; LS4-D).							
				4	Explore how structures and functions of plants and animals allow them to survive in a particular environment (LS4-B).							
				5	Explore that some characteristics of organisms are inherited such as the number of limbs on an animal or flower color and recognize that some behaviors are learned in response to living in a certain environment such as animals using tools to get food (LS3-A).							
				6	Investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and lady bugs.							
				6a	a. Make predictions of a life cycle in a flowering plant using patterns of change (LS1-A).							

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				6b	b. Group similar organisms according to their traits (LS3-B).								
				6c	c. Discuss and find solutions concerning how environment changes plants' and animals' lives (LS4-D).								
				6d	d. Examine and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago (i.e. marine fossils found on dry land) (LS4-A).								















































