

Science/Grade 5 Pacing Guide

Engineering and Technology						Life Science					
Q1	Q2	Q3	Q4	Standard	Tested Percentage	Q1	Q2	Q3	Q4	Standard	Tested Percentage
X	X	X	X	5.ETS1		X				5.LS1	
X	X	X	X	5.ETS2		X				5.LS3	
						X				5.LS4	
Earth Science						Physical Science					
Q1	Q2	Q3	Q4	Standard	Tested Percentage	Q1	Q2	Q3	Q4	Standard	Tested Percentage
	X			5.ESS1				X		5.PS1	
								X	X	5.PS2	
						Physical Science/Review					
									X	5.PS2	

**O: On-going standard**

On-going standards are continually instructed and assessed throughout the year

**E: Standard explicitly instructed**

E standards are introduced and taught with explicit, direct instruction.

**M: Standard instructed and assessed**

M indicates mastery, though re-teaching and assessment are expected through the end of the school year.

**Highlighted standards**

Highlighted standards are identified as Power-Standards, based on the TN Ready blueprints.

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1<sup>st</sup> Quarter

Domain	Cluster	Standard	I can	Vocab	
<p>Engineering and Technology</p>	<p>Engineering Design: 5.ETS1</p>	<p>1) Research, test, re-test, and communicate a design to solve a problem.</p> <p>2) Plan and carry out tests on one or more elements of a prototype in which variables are controlled and failure points are considered to identify which elements need to be improved. Apply the results of tests or redesign the prototype.</p> <p>3) Describe how failure provides valuable information toward finding a solution.</p>	<p>I can research, test, re-test, and communicate a design to solve a problem.</p> <p>I can plan and carry out tests on one or more elements of a prototype in which variables are controlled and failure points are considered to identify which elements need to be improved.</p> <p>I can apply the results of tests or redesign the prototype.</p> <p>I can describe how failure provides valuable information toward finding a solution.</p>	<p>Engineering, research, test, re-test, communicate, design, problem, prototype, variables, failure points, identify, elements, redesign, solution, engineering design process</p>	

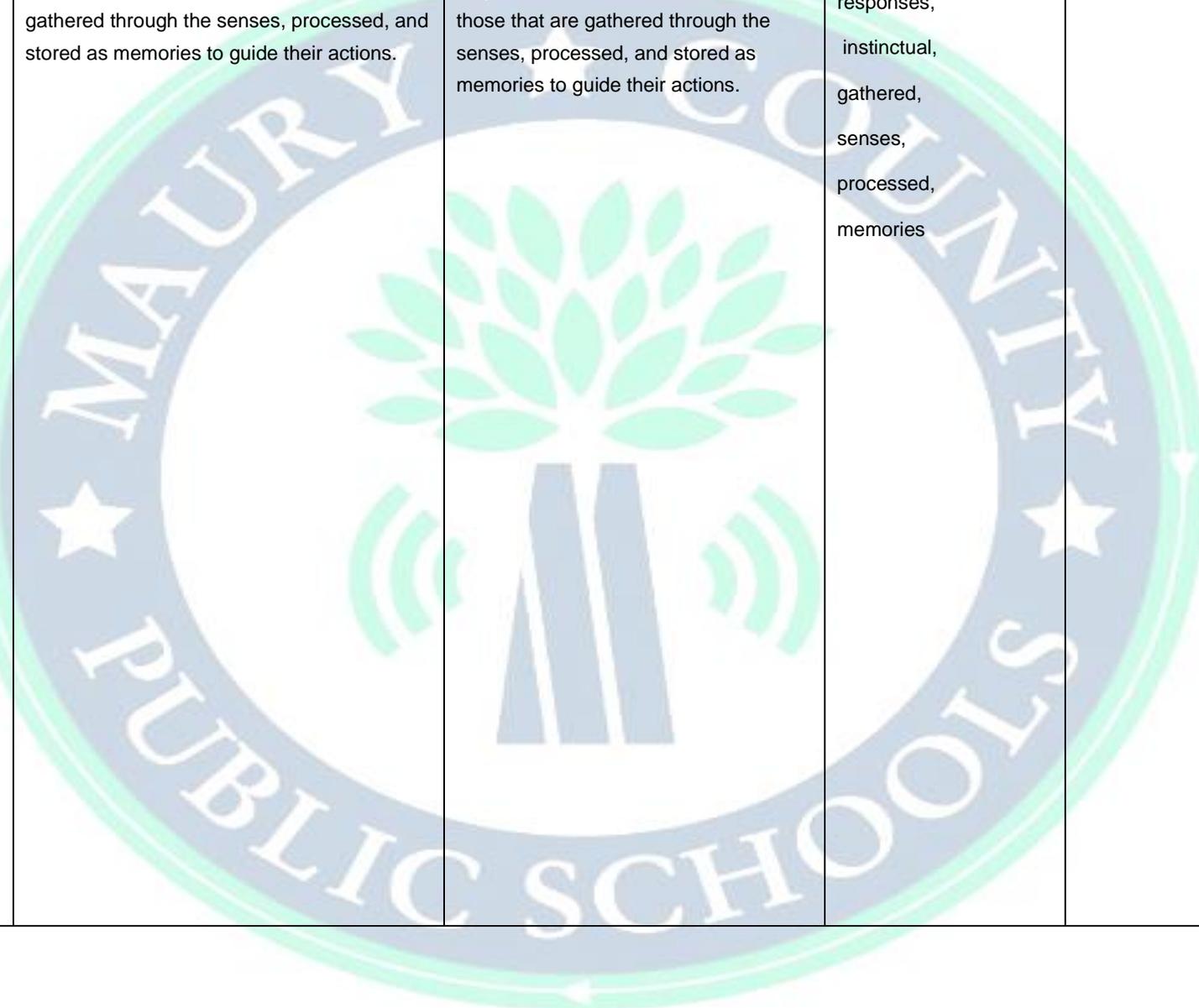
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1st Quarter					
Domain	Cluster	Standard	I Can	Vocabulary	Resources
Technology and Engineering	Links Among Engineering, Technology, Science, and Society: 5.ETS2	<p>1) Use appropriate measuring tools, simple hand tools, and fasteners to construct a prototype of a new or improved technology.</p> <p>2) Describe how human beings have made tools and machines (X-ray cameras, microscopes, satellites, computers) to observe and do things that they could not otherwise sense or do at all, or as quickly or efficiently.</p> <p>3) Identify how scientific discoveries lead to new and improved technologies.</p>	<p>I can use appropriate measuring tools, simple hand tools, and fasteners to construct a prototype of a new or improved technology.</p> <p>I can describe how human beings have made tools and machines (X-ray cameras, microscopes, satellites, computers) to observe and do things that they could not otherwise sense or do at all, or as quickly or efficiently.</p> <p>I can identify how scientific discoveries lead to new and improved technologies.</p>	<p>Appropriate, measuring tools, hand tools, fasteners, construct, improved technology, machines, observe, efficiently, scientific discoveries,</p>	

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1<sup>st</sup> Quarter

Domain	Cluster	Standard	I can	Vocab	
<p>Life Science From Molecules to Organisms</p>	<p>Structures and Processes: 5.LS1</p>	<p>1) Compare and contrast animal responses that are instinctual versus those that are gathered through the senses, processed, and stored as memories to guide their actions.</p>	<p>I can compare and contrast animal responses that are instinctual versus those that are gathered through the senses, processed, and stored as memories to guide their actions.</p>	<p>Compare and contrast, responses, instinctual, gathered, senses, processed, memories</p>	



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1<sup>st</sup> Quarter

Domain	Cluster	Standard	I can	Vocab	
<p>Life Science Heredity</p>	<p>Inheritance and Variation of Traits: 5.LS3</p>	<p>1)Distinguish between inherited characteristics and those characteristics that result from a direct interaction with the environment. Apply this concept by giving examples of characteristics of living organisms that are influenced by inheritance and the environment.</p> <p>2) Provide evidence and analyze data that plants and animals have traits inherited from parents and that variations of these exist in a group of similar organisms,</p>	<p>I can distinguish between inherited characteristics and those characteristics that result from a direct interaction with the environment.</p> <p>I can apply this concept by giving examples of characteristics of living organisms that are influenced by inheritance and the environment.</p> <p>I can provide evidence and analyze data that plants and animals have traits inherited from parents and that variations of these exist in a group of similar organisms,</p>	<p>Inherited, interaction, characteristics, organisms, influenced, inheritance, environment, traits</p>	

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1<sup>st</sup> Quarter

Domain	Cluster	Standard	I can	Vocab	
<p>Life Science Biological Change</p>	<p>Unity and Diversity: 5.LS4</p>	<p>1)Analyze and interpret data from fossils to describe types of organisms and their environments that existed long ago. Compare similarities and differences of those to living organisms and their environment. Recognize that most kinds of animals (and plants) that once lived on Earth are now extinct.</p> <p>2) Use evidence to construct and explanation for how variations in characteristics among individuals within the same species may provide advantages to these individuals in their survival and reproduction.</p>	<p>I can analyze and interpret data from fossils to describe types of organisms and their environments that existed long ago.</p> <p>I can compare similarities and differences of those to living organisms and their environment.</p> <p>I can recognize that most kinds of animals (and plants) that once lived on Earth are now extinct.</p> <p>I can Use evidence to construct and explanation for how variations in characteristics among individuals within the same species may provide advantages to these individuals in their survival and reproduction.</p>	<p>Analyze, interpret, data, fossils, organisms, similarities, differences, extinct, evidence, construct, variations, advantages, survival, reproduction</p>	

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		2 <sup>nd</sup> Quarter				
Domain	Cluster	Standard	I can			
Earth Science	Earth's Place in the Universe: 5.ESS1	<p>1) Explain that differences in the apparent brightness of the sun compared to other stars are due to their relative distances from the Earth.</p> <p>2) Research and explain the position of the Earth and the solar system within the Milky Way galaxy and compare the size and shape of the Milky Way to other galaxies in the universe.</p> <p>3) Use data to categorize different bodies in our solar system including moons, asteroids, comets, and meteoroids according to their physical properties and motion.</p> <p>4) Explain the cause and effect relationship between the positions of the sun, earth, and moon and resulting eclipses, position of constellations, and appearance of the moon.</p> <p>5) Relate the tilt of the Earth's axis, as it revolves around the sun, to the varying intensities of sunlight at different latitudes. Evaluate how this causes changes in day-lengths and seasons.</p> <p>6) Use tools to describe how stars and constellations appear to move from the Earth's perspective throughout the seasons.</p> <p>7) Use evidence from the presence and location of fossils to determine the order in which rock strata were formed.</p>	<p>I can explain that differences in the apparent brightness of the sun compared to other stars are due to their relative distances from the Earth.</p> <p>I can research and explain the position of the Earth and the solar system within the Milky Way galaxy and compare the size and shape of the Milky Way to other galaxies in the universe.</p> <p>I can use data to categorize different bodies in our solar system including moons, asteroids, comets, and meteoroids according to their physical properties and motion.</p> <p>I can explain the cause and effect relationship between the positions of the sun, earth, and moon and resulting eclipses, position of constellations, and appearance of the moon.</p> <p>I can relate the tilt of the Earth's axis, as it revolves around the sun, to the varying intensities of sunlight at different latitudes. Evaluate how this causes changes in day-lengths and seasons.</p> <p>I can use tools to describe how stars and constellations appear to move from the Earth's perspective throughout the seasons.</p> <p>I can use evidence from the presence and location of fossils to determine the order in which rock strata were formed.</p>	<p>Sun, Star</p> <p>apparent distance</p> <p>main sequence</p> <p>giant/white dwarf</p> <p>super giant, galaxy</p> <p>spiral, elliptical, irregular</p> <p>relative position</p> <p>classification</p> <p>planets, orbital path</p> <p>moon, comet</p> <p>asteroid, meteoroids</p> <p>eclipse, solar eclipse</p> <p>lunar eclipse</p> <p>constellation</p> <p>phases of the moon</p> <p>rotation, revolution, tilt, axis, day, year, seasons, latitude</p> <p>constellation,</p> <p>Earth's perspective, star</p> <p>Rock, strata, fossil, evidence</p>		

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3 <sup>rd</sup> Quarter					
Domain	Cluster	Standard	I can	Vocab	
Physical Science	Matter and Its Interactions 5.PS1	1) Analyze and interpret data from observations and measurements of the physical properties of matter to explain phase changes between a solid, liquid, or gas	I can analyze and interpret data from observations and measurements of the physical properties of matter to explain phase changes between a solid, liquid, or gas	Analyze, interpret, explain, solid, liquid, gas,	
		2) Analyze and interpret data to show that the amount of matter is conserved even when it changes form, including transitions where matter seems to vanish	I can analyze and interpret data to show that the amount of matter is conserved even when it changes form, including transitions where matter seems to vanish	observation, physical properties, matter, conservation, variables, temperature,	
		3) Design a process to measure how different variables (temperature, particle size, stirring) affect the rate of dissolving solids into liquids.	I can design a process to measure how different variables (temperature, particle size, stirring) affect the rate of dissolving solids into liquids.	dissolving, particle, thermometer, F°, C°,	
		4) Evaluate the results of an experiment to determine whether the mixing of two or more substances result in a change of properties.	I can evaluate the results of an experiment to determine whether the mixing of two or more substances result in a change of properties.	evaluate, mixture, substance	

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3rd Quarter					
Domain	Cluster	Standard	I Can	Vocabulary	Resources
Physical Science	Motion and Stability: Forces and Interactions 5.PS2	1) Test the effects of balanced and unbalanced forces on the speed and direction of motion of objects	I can test the effects of balanced and unbalanced forces on the speed and direction of motion of objects	balanced/unbalanced forces, force, net force,	
		2) Make observations and measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	I can make observations and measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	predict, pattern, evidence, motion, pendulum,	
		3) Use evidence to support that the gravitational force exerted by Earth on objects is directed toward the Earth's center.	I can use evidence to support that the gravitational force exerted by Earth on objects is directed toward the Earth's center.	gravity, force, exert, mass, distance,	
		4) Explain the cause and effect relationship of two factors (mass and distance) that affect gravity.	I can explain the cause and effect relationship of two factors (mass and distance) that affect gravity.	cause/effect, pattern, system, force,	
		5) Explain how forces can create patterns within a system (moving in one direction, shifting back and forth, or moving in cycles), and describe conditions that affect how fast or slowly these patterns occur.	I can explain how forces can create patterns within a system (moving in one direction, shifting back and forth, or moving in cycles), and describe conditions that affect how fast or slowly these patterns occur.	acceleration	

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4 <sup>th</sup> Quarter				
Domain	Cluster	Standard	I can	Vocab
Physical Science Standards Review	Motion and Stability: Forces and Interactions 5.PS2	1) Complete any Physical Science Standards not yet completed.	I can complete 5 <sup>th</sup> grade Physical Science Standards.	Review all vocabulary
		2) Review all standards to prepare for TNReady Testing	I can complete a successful review of 5 <sup>th</sup> grade Science Standards and be prepared for the TNReady Science test.	
		3) Collaborate with 6 <sup>th</sup> grade Science Department and begin 6 <sup>th</sup> grade standards after TNReady Testing is complete	I can begin 6 <sup>th</sup> grade Science Standards and show competence on the material.	

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