## Science Standards: Kindergarten through 8th grade

	Kindergarten	1st Grade	2 <sup>nd</sup> Grade	3 <sup>rd</sup> Grade	4 <sup>th</sup> Grade	5 <sup>th</sup> Grade	6 <sup>th</sup> Grade	7 <sup>th</sup> Grade	8th Grade
Life Science	• Knows	<ul> <li>Knows that</li> </ul>	<ul> <li>Knows that</li> </ul>	• Knows	• Knows all	<ul> <li>Knows plants</li> </ul>	<ul> <li>Understands the</li> </ul>	<ul> <li>Understands</li> </ul>	Understands the
	different types	plants and	plants and	adaptations in	organisms	and animals	principles of	the structure	principles of
	of plants and	animals meet	animals have	physical	need energy	have	heredity and its	and function of	heredity and its
	animals that	their needs in	predictable life	structure or	and matter to	structures for	related concepts	cells and	related concepts
	inhabit the	different ways	cycles	behavior may	live and grow	respiration,	<ul> <li>Understands the</li> </ul>	organisms	<ul> <li>Understands the</li> </ul>
	earth			improve an	<ul> <li>Knows living</li> </ul>	digestion,	structure and	<ul> <li>Understands</li> </ul>	structure and
	<ul> <li>Knows how</li> </ul>			organism's	organisms	waste disposal,	function of cells and	the	function of cells
	humans use			chance for	depend on one	and transport	organisms	relationships	and organisms
	their senses to			survival	another and on	of materials	<ul> <li>Understands the</li> </ul>	among	<ul> <li>Understands</li> </ul>
	interact with				their		relationships	organisms and	relationships
	their				environment		among organisms	their physical	among organisms
	surroundings				for survival		and their physical	environment	and their physical
							environment	<ul> <li>Understands</li> </ul>	environment
							<ul> <li>Understands</li> </ul>	biological	<ul> <li>Understands</li> </ul>
							biological evolution	evolution and	biological
							and the diversity of	the diversity of	evolution and the
							life	life	diversity of life
Physical Science	• Knows	<ul> <li>Knows the</li> </ul>	• Knows	Knows energy	• Knows	Knows the	<ul> <li>Understands the</li> </ul>		Understands the
	properties of	motion of	materials come	and matter	electricity and	elements and	structure and		structure and
	materials can	objects can be	in different	have multiple	magnetism are	their	properties of		properties of
	be observed,	observed and	forms (states),	forms and can	related effects	combinations	matter		matter
	measured, and	measured	including	be changed	that have many	account for all	<ul> <li>Understands</li> </ul>		<ul> <li>Understands</li> </ul>
	predicted		solids and	from one form	useful	the varied	chemical reactions		chemical reactions
			liquids	to another	applications in	types of matter	<ul> <li>Understands the</li> </ul>		<ul> <li>Understands the</li> </ul>
				<ul> <li>Knows light</li> </ul>	everyday life	in the world	sources and		sources and
				has a source			properties of heat		properties of
				and travels in a			energy		energy
				direction			<ul> <li>Understands forces</li> </ul>		<ul> <li>Understands forces</li> </ul>
							and motion		and motion
							<ul> <li>Understands waves</li> </ul>		<ul> <li>Understands</li> </ul>
							and optics		waves and optics
							<ul> <li>Understands</li> </ul>		<ul> <li>Understands</li> </ul>
							electricity and		electricity and
							magnetism		magnetism

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Earth and Space	<ul> <li>Knows the</li> </ul>	• Knows	<ul> <li>Knows the</li> </ul>	<ul> <li>Knows the</li> </ul>	<ul> <li>Knows water</li> </ul>	• Knows	<ul> <li>Understands</li> </ul>	<ul> <li>Understands</li> </ul>	•
Science	earth is	weather can be	earth is made	properties of	on earth moves	landforms are	earth's composition	earth's	
	composed of	observed,	of materials	rocks and	between the	the result of a	and structure	composition	
	land, air, and	measured, and	that have	minerals are	oceans and	combination of	<ul> <li>Understands the</li> </ul>	and structure	
	water	described	distinct	reflections of	land through	destructive	composition and	<ul> <li>Understands</li> </ul>	
			properties and	the processes	the processes	forces, such as	structure of the	the	
			provide	that formed	of evaporation	erosion, and	atmosphere	composition	
			resources for	them	and	constructive	<ul> <li>Understands the</li> </ul>	and structure	
			human	<ul> <li>Knows waves,</li> </ul>	condensation	forces, such as	composition and	of the	
			activities	wind, water,	<ul> <li>Knows energy</li> </ul>	deposition of	structure of the	atmosphere	
				and ice shape	from the sun	sediments	universe	<ul> <li>Understands</li> </ul>	
				and reshape	heats earth	<ul> <li>Knows the</li> </ul>		the	
				the earth's land	unevenly,	surface of the		composition	
				surface	causing air	earth changes		and structure	
					movements	and that some		of the universe	
					that result in	changes are			
					changing	due to slow			
					weather	processes and			
					patterns	others are due			
					• Knows the	to rapid			
					solar system	processes			
					consists of				
					planets and				
					other bodies				
					that orbit the				
					sun in				
					predictable				
					paths				
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Nature of	<ul> <li>Engages in the</li> </ul>	<ul> <li>Engages in the</li> </ul>	<ul> <li>Engages in the</li> </ul>	• Engages in the	• Engages in the	• Engages in the	<ul> <li>Understands</li> </ul>	<ul> <li>Understands</li> </ul>	<ul> <li>Understands</li> </ul>
Science	scientific	scientific	scientific	scientific	scientific	scientific	science is a process	science is a	science is a process
	process by	process by	process by	process by	process by	process by	used to solve	process used to	used to solve
	asking	asking	asking	asking	asking	asking	problems	solve problems	problems
	meaningful	meaningful	meaningful	meaningful	meaningful	meaningful	<ul> <li>Engages in the</li> </ul>	<ul> <li>Engages in the</li> </ul>	<ul> <li>Engages in the</li> </ul>
	questions and	questions and	questions and	questions and	questions and	questions and	scientific process	scientific	scientific process
	conducting	using scientific	conducting	conducting	conducting	conducting	by asking	process by	by asking
	careful	thinking to	careful	careful	careful	careful	meaningful	asking	meaningful
	investigations	conduct careful	investigations	investigations	investigations	investigations	questions and	meaningful	questions and
	<ul> <li>Understands</li> </ul>	investigations	<ul> <li>Understands</li> </ul>	<ul> <li>Understands</li> </ul>	<ul> <li>Understands</li> </ul>	<ul> <li>Understands</li> </ul>	conducting careful	questions and	conducting careful
	the	and build	the	the	the	the	investigations	conducting	investigations
	connections	explanations	connections	connections	connections	connections	<ul> <li>Understands the</li> </ul>	careful	<ul> <li>Understands the</li> </ul>
	between	<ul> <li>Understands</li> </ul>	between	between	between	between	nature of scientific	investigations	nature of scientific
	science, global	the	science, global	science, global	science, global	science, global	knowledge	<ul> <li>Understands</li> </ul>	knowledge
	issues and	connections	issues and	issues and	issues and	issues and	<ul> <li>Understands</li> </ul>	the nature of	<ul> <li>Understands</li> </ul>
	sustainable	between	sustainable	sustainable	sustainable	sustainable	scientific enterprise	scientific	scientific
	solutions	science, global	solutions	solutions	solutions	solutions	as it relates to	knowledge	enterprise as it
		issues, and					ethics and ideas	<ul> <li>Understands</li> </ul>	relates to ethics
		sustainable					<ul> <li>Understands the</li> </ul>	scientific	and ideas
		solutions					connections among	enterprise as it	<ul> <li>Understands the</li> </ul>
							science, global	relates to	connections among
							issues, and	ethics and	science, global
							sustainable	ideas	issues, and
							solutions	<ul> <li>Understands</li> </ul>	sustainable
								the	solutions
								connections	
								among science,	
								global issues,	
								and	
								sustainable	
								solutions	

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