

Science Standards: Kindergarten through 8th grade

	Kindergarten	1 st Grade	2 nd Grade	3 rd Grade	4 th Grade	5 th Grade	6 th Grade	7 th Grade	8 th Grade
Life Science	<ul style="list-style-type: none"> • Knows different types of plants and animals that inhabit the earth • Knows how humans use their senses to interact with their surroundings 	<ul style="list-style-type: none"> • Knows that plants and animals meet their needs in different ways 	<ul style="list-style-type: none"> • Knows that plants and animals have predictable life cycles 	<ul style="list-style-type: none"> • Knows adaptations in physical structure or behavior may improve an organism's chance for survival 	<ul style="list-style-type: none"> • Knows all organisms need energy and matter to live and grow • Knows living organisms depend on one another and on their environment for survival 	<ul style="list-style-type: none"> • Knows plants and animals have structures for respiration, digestion, waste disposal, and transport of materials 	<ul style="list-style-type: none"> • Understands the principles of heredity and its related concepts • Understands the structure and function of cells and organisms • Understands the relationships among organisms and their physical environment • Understands biological evolution and the diversity of life 	<ul style="list-style-type: none"> • Understands the structure and function of cells and organisms • Understands the relationships among organisms and their physical environment • Understands biological evolution and the diversity of life 	<ul style="list-style-type: none"> • Understands the principles of heredity and its related concepts • Understands the structure and function of cells and organisms • Understands relationships among organisms and their physical environment • Understands biological evolution and the diversity of life
Physical Science	<ul style="list-style-type: none"> • Knows properties of materials can be observed, measured, and predicted 	<ul style="list-style-type: none"> • Knows the motion of objects can be observed and measured 	<ul style="list-style-type: none"> • Knows materials come in different forms (states), including solids and liquids 	<ul style="list-style-type: none"> • Knows energy and matter have multiple forms and can be changed from one form to another • Knows light has a source and travels in a direction 	<ul style="list-style-type: none"> • Knows electricity and magnetism are related effects that have many useful applications in everyday life 	<ul style="list-style-type: none"> • Knows the elements and their combinations account for all the varied types of matter in the world 	<ul style="list-style-type: none"> • Understands the structure and properties of matter • Understands chemical reactions • Understands the sources and properties of heat energy • Understands forces and motion • Understands waves and optics • Understands electricity and magnetism 		<ul style="list-style-type: none"> • Understands the structure and properties of matter • Understands chemical reactions • Understands the sources and properties of energy • Understands forces and motion • Understands waves and optics • Understands electricity and magnetism

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Earth and Space Science	<ul style="list-style-type: none"> • Knows the earth is composed of land, air, and water 	<ul style="list-style-type: none"> • Knows weather can be observed, measured, and described 	<ul style="list-style-type: none"> • Knows the earth is made of materials that have distinct properties and provide resources for human activities 	<ul style="list-style-type: none"> • Knows the properties of rocks and minerals are reflections of the processes that formed them • Knows waves, wind, water, and ice shape and reshape the earth's land surface 	<ul style="list-style-type: none"> • Knows water on earth moves between the oceans and land through the processes of evaporation and condensation • Knows energy from the sun heats earth unevenly, causing air movements that result in changing weather patterns • Knows the solar system consists of planets and other bodies that orbit the sun in predictable paths 	<ul style="list-style-type: none"> • Knows landforms are the result of a combination of destructive forces, such as erosion, and constructive forces, such as deposition of sediments • Knows the surface of the earth changes and that some changes are due to slow processes and others are due to rapid processes 	<ul style="list-style-type: none"> • Understands earth's composition and structure • Understands the composition and structure of the atmosphere • Understands the composition and structure of the universe 	<ul style="list-style-type: none"> • Understands earth's composition and structure • Understands the composition and structure of the atmosphere • Understands the composition and structure of the universe 	<ul style="list-style-type: none"> •

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Nature of Science	<ul style="list-style-type: none"> Engages in the scientific process by asking meaningful questions and conducting careful investigations Understands the connections between science, global issues and sustainable solutions 	<ul style="list-style-type: none"> Engages in the scientific process by asking meaningful questions and using scientific thinking to conduct careful investigations and build explanations Understands the connections between science, global issues, and sustainable solutions 	<ul style="list-style-type: none"> Engages in the scientific process by asking meaningful questions and conducting careful investigations Understands the connections between science, global issues and sustainable solutions 	<ul style="list-style-type: none"> Engages in the scientific process by asking meaningful questions and conducting careful investigations Understands the connections between science, global issues and sustainable solutions 	<ul style="list-style-type: none"> Engages in the scientific process by asking meaningful questions and conducting careful investigations Understands the connections between science, global issues and sustainable solutions 	<ul style="list-style-type: none"> Engages in the scientific process by asking meaningful questions and conducting careful investigations Understands the connections between science, global issues and sustainable solutions 	<ul style="list-style-type: none"> Understands science is a process used to solve problems Engages in the scientific process by asking meaningful questions and conducting careful investigations Understands the nature of scientific knowledge Understands scientific enterprise as it relates to ethics and ideas Understands the connections among science, global issues, and sustainable solutions 	<ul style="list-style-type: none"> Understands science is a process used to solve problems Engages in the scientific process by asking meaningful questions and conducting careful investigations Understands the nature of scientific knowledge Understands scientific enterprise as it relates to ethics and ideas Understands the connections among science, global issues, and sustainable solutions 	<ul style="list-style-type: none"> Understands science is a process used to solve problems Engages in the scientific process by asking meaningful questions and conducting careful investigations Understands the nature of scientific knowledge Understands scientific enterprise as it relates to ethics and ideas Understands the connections among science, global issues, and sustainable solutions