

CATEGORY	STANDARD	CONCEPTS AND PRINCIPLES	WOOD AND PAPER	FABRIC	TREES	ANIMALS TWO BY TWO	AIR AND WEATHER	PEBBLES, SAND AND SILT	INSECTS	NEW PLANTS	BALANCE AND MOTION	SOLIDS AND LIQUIDS	MEASUREMENT	IDEAS AND INVENTIONS	EARTH MATERIALS	WATER	HUMAN BODY	STRUCTURES OF LIFE	PHYSICS OF SOUND	MAGNETISM AND ELECTRICITY
		Scientists develop explanations using observations (evidence) and what they already know about the world (scientific knowledge).					X		X	X	X	X	X	X	X	X	X	X	X	X
		Scientists make the results of their investigations public; they describe the investigations in ways that enable others to repeat the investigations.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		Scientists review and ask questions about the results of other scientists' work.	X	X	X	X	X	X	X	X	X	x	X	X	X	X	X	X	X	X
PHYSICAL SCIENCE	PROPERTIES OF OBJECTS AND MATERIALS	Objects have observable properties that can be measured.	X				X	X			X	X	X	X	X	X	X	X	X	X
		Objects are made of one or more materials and can be described by the properties of these materials. Those properties can be used to separate or sort a group of objects or materials.	X	X				X				X	X	X	X	X	X			X
		Materials can exist in different states—solid, liquid, and gas. Some common materials, such as water, can be changed from one state to another by heating or cooling.			X		X					X				X				
	POSITION AND MOTION OF OBJECTS	The position of an object can be described by locating it relative to another object or the background.				X	X				X									
		An object's motion can be described by tracing and measuring its position over time.									X									

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		The position and motion of objects can be changed by pushing or pulling. The size of the change is related to the strength of the push or pull.									X									
		Sound is produced by vibrating objects. The pitch of the sound can be varied by changing the rate of vibration.									X									X
	LIGHT, HEAT, ELECTRICITY, AND MAGNETISM	Light travels in a straight line until it strikes an object. Light can be reflected by a mirror, refracted by a lens, or absorbed by the object.												X						
		Heat can be produced in many ways, such as burning, rubbing, or mixing one substance with another. Heat can move from one object to another by conduction.																		
		Electricity in circuits can produce light, heat, sound, and magnetic effects. Electrical circuits require a complete loop through which an electrical current can pass.																		X
		Magnets attract and repel each other and certain kinds of other materials.		X																X

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LIFE SCIENCE	THE CHARACTERISTICS OF ORGANISMS	Organisms have basic needs.			X	X			X	X							X	X		
		Each plant or animal has different structures that serve different functions in growth, survival, and reproduction.			X	X			X	X							X	X		
		The behavior of individual organism is influenced by internal cues and by external cues. Humans and other organisms have senses that help them detect internal and external cues.				X			X								X	X		
	LIFE CYCLES OF ORGANISMS	Plants and animals have life cycles which include birth, development into adults, reproduction, and death.			X	X			X	X									X	
		Plants and animals closely resemble their parents.			X	X			X	X									X	
	ORGANISMS AND ENVIRONMENTS	Many characteristics of an organism are inherited from the parents of the organism, but other characteristics result from an individual's interactions with the environment.			X	X			X	X							X	X		
		All animals depend on plants.				X			X										X	
		An organism's patterns of behavior are related to the nature of that organism's environment.				X			X										X	
		All organisms cause changes in the environment where they live.				X			X	X									X	

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		Humans depend on their natural and constructed environments. Humans change environments in ways that can be either beneficial or detrimental for themselves and other organisms.				X			X	X									X		
EARTH SCIENCE	PROPERTIES OF EARTH MATERIALS	Earth materials are solid rocks and soils, water, and the gases of the atmosphere. The varied materials have different properties which make them useful in different ways. Earth materials provide many of the resources that humans use.	X				X	X							X	X					
		Soils have properties of color and texture, capacity to retain water, and ability to support the growth of many kinds of plants.						X								X					
		Fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.													X		X				
	OBJECTS IN THE SKY	The sun, moon, stars, clouds, bird, and airplanes all have properties, locations, and movements that can be observed and described.					X														
		The Sun provides the light and heat necessary to maintain the temperature of the Earth.					X														

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	CHANGES IN EARTH AND SKY	The surface of the Earth changes. Some changes are due to slow processes, such as erosion and weathering, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.														X					
		Weather changes from day to day and over the seasons. Weather can be described by measurable quantities, such as temperature, wind direction and speed, and precipitation.			X		X							X			X				
		Objects in the sky have patterns of movement.					X														
SCIENCE AND TECHNOLOGY	ABILITIES OF TECHNOLOGICAL DESIGN	Identify a simple problem.									X	X	X	X	X	X	X	X	X	X	X
		Propose a solution.									X	X		X	X	X	X	X	X	X	X
		Implementing proposed solutions.									X	X		X	X	X	X	X	X	X	X
		Evaluate a product or design.	X	X							X	X	X	X	X	X	X	X	X	X	X
		Communicate a problem, design, or solution.	X	X							X	X	X	X	X	X	X	X	X	X	X
	UNDERSTANDING ABOUT SCIENCE AND TECHNOLOGY	People have always had questions about their world. Science is one way of answering questions and explaining the natural world.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		People have always had problems and invented tools and techniques to solve problems. Trying to determine the effects of solutions helps people avoid some new problems.											X	X		X		X	X	X	X

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		Scientists and engineers often work in teams with different individuals doing different things that contribute to the results.							X				X	X	X	X	X	X	X	X	X
		Women and men of all ages, backgrounds, and groups engage in a variety of scientific and technological work.											X	X	X	X	X	X	X	X	X
		Tools help scientists make better observations, measurements, and equipment for investigations. They help scientists see, measure, and do things that they could not otherwise see, measure, and do.					X	X					X	X	X		X			X	X
	ABILITIES TO DISTINGUISH BETWEEN NATURAL OBJECTS AND OBJECTS MADE BY HUMANS	Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
		Objects can be categorized into two groups, natural and designed.	X	X	X		X	X				X		X	X	X			X		X
SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES	PERSONAL HEALTH	Safety and security are basic needs of humans.																		X	
		Individuals have some responsibility for their own health. Students should engage in personal care—dental hygiene, cleanliness, and exercise—that will maintain and improve health.															X				

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		Nutrition is essential to health. Students should understand how the body uses food and how various foods contribute to health.															X			
		Different substances can damage the body and how it functions.															X			
	CHARACTERISTICS AND CHANGES IN POPULATIONS	Human populations include groups of individuals living in a particular location. One important characteristic of a population is the population density—the number of individuals of a particular population that lives in a given amount of space.																		
		The size of a human population can increase and decrease.																		
	TYPES OF RESOURCES	Resources are things that we get from the living and nonliving environment to meet the needs and wants of a population.	X	X				X							X	X				
		Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials; and some resources are nonmaterial, such as quiet places, beauty, etc.	X	X	X		X	X							X	X				
	CHANGES IN ENVIRONMENTS	Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.				X			X	X						X		X		

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		Changes in environments can be natural or influenced by humans. Some changes are good, some are bad, and some are neither good nor bad.				X			X	X						X		X		
		Some environmental changes occur slowly, and others occur rapidly. Students should understand the different consequences of changing environments in small increments over long periods as compared with changing environments in large...														X		X		
	SCIENCE AND TECHNOLOGY IN LOCAL CHALLENGES	People continue inventing new ways of doing things, solving problems, and getting work done. New ideas and inventions often affect other people.											X	X		X		X		X
		Science and technology have greatly improved food quality and quantity, transportation, health, sanitation, and communication. These benefits of science and technology are not available to all of the people in the world.														X		X	X	X

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HISTORY AND NATURE OF SCIENCE	SCIENCE AS A HUMAN ENDEAVOR	Science and technology have been practiced by people for a long time.											X	X	X	X	X	X	X	X	X
		Men and women have made a variety of contributions throughout the history of science and technology.											X	X	X	X	X	X	X	X	X
		Although men and women using scientific inquiry have learned much about the objects, events, and phenomena in nature, much more remains to be understood. Science will never be finished.											X	X	X	X	X	X	X	X	X
		Many people choose science as a career and devote their entire lives to studying it. Many people derive great pleasure from doing science.												X	X	X	X	X	X	X	X