

SCIS 3+ Correlation

National Science Education Standards Levels K-4

	Kindergarten <i>Beginnings</i>	Level 1 <i>Material Objects</i>	Level 1 <i>Organisms</i>	Level 2 <i>Interaction and Systems</i>	Level 2 <i>Life Cycles</i>	Level 3 <i>Subsystems and Variables</i>	Level 3 <i>Populations</i>	Level 4 <i>Relative Position and Motion</i>	Level 4 <i>Environments</i>
Unifying Concepts and Processes									
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Systems, order and organization	☆	☆	☆	☆	☆	☆	☆	☆	☆
Evidence, models and explanation		☆	☆	☆	☆	☆	☆	☆	☆
Change, constancy and measurement	☆	☆	☆	☆	☆	☆	☆	☆	☆
Evolution and equilibrium									
Form and function	☆		☆	☆	☆	☆	☆		☆
Science as Inquiry									
<i>Abilities Necessary to do Scientific Inquiry</i>									
Ask a question about objects and organisms and events in the environment	☆	☆	☆	☆	☆	☆	☆	☆	☆
Plan and conduct simple investigations		☆	☆	☆	☆	☆	☆	☆	☆
Employ simple equipment and tools to gather data and extend the senses	☆	☆	☆	☆	☆	☆	☆	☆	☆
Use data to construct a reasonable explanation		☆	☆	☆	☆	☆	☆	☆	☆
Communicate investigations and explanations	☆	☆	☆	☆	☆	☆	☆	☆	☆
<i>Understanding About Scientific Inquiry</i>									
Scientific investigations involve asking and answering a question and then comparing answers to what scientists know			☆	☆	☆	☆	☆	☆	☆
Scientists use different kinds of investigations depending on the questions they are trying to answer				☆	☆	☆	☆		☆
Simple instruments provide more information than the senses	☆	☆	☆	☆	☆	☆	☆	☆	☆
Scientists develop explanations using observations (evidence) and what they already know about the world		☆	☆	☆	☆	☆	☆	☆	☆

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Scientists make the results of their investigations public		☆	☆	☆	☆	☆	☆	☆	☆
Scientists review and ask questions about the results of other scientists' work		☆	☆	☆	☆	☆	☆	☆	☆
Physical Science									
<i>Properties of Objects and Materials</i>									
Objects have many observable properties, including size, weight, shape, color, temperature and the ability to react with other substances	☆	☆		☆		☆		☆	
Objects can be described by the properties of materials from which they are made, and those properties can be used to separate or sort a group of objects	☆	☆		☆		☆		☆	
<i>Position and Motion of Objects</i>									
The position of an object can be described by locating it relative to another object or the background	☆			☆				☆	
The object's motion can be described by tracing and measuring its position over time		☆		☆		☆		☆	
The position and motion of objects can be changed by pushing or pulling				☆		☆		☆	
Sound is produced by vibrating objects. The pitch of the sound can be varied by changing the rate of the vibration	☆					☆			
<i>Light, Heat, Electricity and Magnetism</i>									
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									
Heat can be produced in many ways. Heat can move from one object to another by conduction						☆			

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Electricity in circuits can produce light, heat, sound, and magnetic effects				☆		☆			
Electrical circuits require a complete loop through which an electrical circuit can pass				☆		☆			
Magnets attract and repel each other and certain kinds of materials				☆					
Life Science									
<i>The Characteristics of Organisms</i>									
Organisms have basic needs	☆		☆		☆		☆		☆
Organisms can survive only in environments in which their needs can be met	☆		☆		☆		☆		☆
The world has many different environments and distinct environments support the life of different types of organisms									☆
Each plant or animal has different structures that serve different functions in growth, survival and reproduction			☆		☆		☆		☆
The behavior of individual organisms is influenced by internal and external cues. Humans and other organisms have senses that help them detect internal and external cues	☆						☆		☆
<i>Life Cycles of Organisms</i>									
Plants and animals have life cycles that include being born, developing into adults, reproducing and eventually dying			☆		☆		☆		☆
Plants and animals closely resemble their parents					☆		☆		
Many characteristics of an organism are inherited from its parents, but other characteristics result from an individual's interactions with the environment							☆		☆

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Organisms and Their Environment									
All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants			☆		☆		☆		
An organism's patterns of behavior are related to the nature of that organism's environment	☆		☆		☆		☆		☆
When the environment changes, some plants and animals survive and reproduce, and others die or move							☆		☆
All organisms cause changes in the environment where they live. Some changes are detrimental to the organism whereas others are beneficial			☆				☆		☆
Humans depend on their natural and constructed environments							☆		☆
Earth and Space Science									
Properties of Earth Materials									
Earth materials are solid rocks and soils, water and the gases of the atmosphere		☆		☆		☆			
The varied materials have different physical and chemical properties which make them useful in different ways		☆		☆		☆			
Soils have properties of color and texture, capacity to retain water and the ability to support the growth of many kinds of plants		☆							
Fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time									

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Objects in the Sky									
The sun, moon, stars, clouds, birds and airplanes all have properties, locations and movements that can be observed and described				☆				☆	
The sun provides the light and heat necessary to maintain the temperature of the earth									
Changes in the Earth and Sky									
The surface of the earth changes				☆					
Weather changes from day to day and over the seasons				☆		☆		☆	
Objects in the sky have patterns of movement				☆				☆	
Science and Technology									
Abilities of Technological Design									
Identify a simple problem		☆	☆	☆	☆	☆	☆	☆	☆
Propose a solution		☆	☆	☆	☆	☆	☆	☆	☆
Implement proposed solution		☆	☆	☆	☆	☆	☆	☆	☆
Evaluate a product or design		☆	☆	☆	☆	☆	☆	☆	☆
Communicate a problem, design and solution		☆	☆	☆	☆	☆	☆	☆	☆
Understanding about Science and Technology									
Science is one way of answering questions and explaining the natural world					*	☆	☆	☆	☆
Trying to determine the effects of tools and techniques used to solve problems helps people avoid some new problems							☆		☆
Scientists and engineers often work in teams with different individuals doing different things that contribute to the results		☆			*	☆	☆	☆	☆
Women and men of all ages, backgrounds, and groups engage in a variety of scientific and technical work				☆	*	☆	☆	☆	☆

* See SCIS 3+ Technology Correlation

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Tools help scientists make better observations, measurements and equipment for investigations		☆			*	*	☆	☆	☆
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		☆							
Objects can be categorized into two groups, natural and designed		☆							
Science in Personal and Social Perspectives									
Science in Personal and Social Perspectives									
Personal health									
Characteristics and changes in human populations							☆		☆
Types of resources			☆				☆		☆
Changes in environments	☆	☆	☆	☆	☆	☆	☆	☆	☆
Science and technology in local challenges		☆	☆	☆		☆	☆		☆
History and Nature of Science									
Science as a Human Endeavor									
Science and technology have been practiced for a long time		☆	☆	☆	☆	☆	☆	☆	
Men and women have made a variety of contributions throughout the history of science and technology				**	**			**	
Much remains to be understood. Science will never be finished	☆	☆	☆	☆	☆	☆	☆	☆	☆
Many people choose and enjoy science as a career and devote their lives to studying it	☆	☆	☆	☆	☆	☆	☆	☆	☆

* See SCIS 3+ Technology Correlation

** See SCIS 3+ Literature Correlation