



# Jones County Schools

## Kindergarten MS CCRS Science

### Pacing Guide

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### FIRST NINE WEEKS

Comp/ Obj. #	Student Objective	Date Master ed
	<p><b>L.K.1 Hierarchical Organization Conceptual Understanding:</b> Objects in the environment can be classified as living and nonliving. Living things include plants and animals. All living things reproduce, grow, develop, respond to stimuli, and die; and nonliving things do not. Living things require air, food, water, and an environment in which to live. Acting as scientists, students will observe the natural world and use investigations, charts, drawings, sketches, and models to communicate ideas.</p>	
<b>L.K.1A</b>	<b>Students will demonstrate an understanding of living and nonliving things.</b>	
<i>L.K.1A.1</i>	<i>With teacher guidance, conduct an investigation of living organisms and nonliving objects in various real-world environments to define characteristics of living organisms that distinguish them from nonliving things (e.g., playground, garden, school grounds).</i>	
<i>L.K.1A.2</i>	<i>With teacher support, gain an understanding that scientists are humans who use observations to learn about the natural world. Obtain information from informational text or other media about scientists who have made important observations about living things (e.g. Carl Linnaeus, John James Audubon, Jane Goodall).</i>	
	<p><b>Conceptual Understanding:</b> All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air. Animals (including humans) use their senses to learn about the world around them.</p>	
<b>L.K.1B</b>	<b>Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.</b>	
<i>L.K.1B.1</i>	<i>Develop and use models to exemplify how animals use their body parts to (a) obtain food and other resources, (b) protect themselves, and (c) move from place to place.</i>	
<i>L.K.1B.2</i>	<i>Identify and describe examples of how animals use their sensory body parts (eyes to detect light and movement, ears to detect sound, skin to detect temperature and touch, tongue to taste, and nose to detect smell).</i>	
	<p><b>L.K.3 Ecology and Interdependence Conceptual Understanding:</b> The environment consists of many types of living things including plants and animals. Living things depend on the land, water, and air to live and grow.</p>	

## FIRST NINE WEEKS Cont.

Comp/ Obj. #	Student Objective	Date Mastered
<b>L.K.3A</b>	<b>Students will demonstrate an understanding of what animals and plants need to live and grow.</b>	
<i>L.K.3A.1</i>	<i>With teacher guidance, conduct a structured investigation to determine what plants need to live and grow (water, light, and a place to grow). Measure growth by directly comparing plants with other objects.</i>	
<i>L.K.3A.2</i>	<i>Construct explanations using observations to describe and report what animals need to live and grow (food, water, shelter, and space).</i>	

## SECOND NINE WEEKS

Comp./ Obj. #	Student Objective	Date Mastered
	<p><b>L.K.3 Ecology and Interdependence Conceptual Understanding:</b> Interdependence exists between plants and animals within an environment. Living things can only survive in areas where their needs for air, water, food, and shelter are met</p>	
<b>L.K.3B</b>	<b>Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.</b>	
<i>L.K.3B.1</i>	<i>Observe and communicate that animals get food from plants or other animals. Plants make their own food and need light to live and grow.</i>	
<i>L.K.3B.2</i>	<i>Create a model habitat which demonstrates interdependence of plants and animals using an engineering design process to define the problem, design, construct, evaluate, and improve the habitat.*</i>	
	<p><b>L.K.2 Reproduction and Heredity Conceptual Understanding:</b> Plants and animals change in form as they go through stages in the life cycle. Young plants and animals are very much like their parents and other plants and animals of the same kind, but they can also vary in many ways.</p>	
<b>L.K.2</b>	<b>Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.</b>	
<i>L.K.2.1</i>	<i>Use informational text or other media to make observations about plants as they change during the life cycle (e.g., germination, growth, reproduction, and death) and use models (e.g., drawing, writing, dramatization, or technology) to communicate findings.</i>	
<i>L.K.2.2</i>	<i>Construct explanations using observations to describe and model the life cycle (birth, growth, adulthood, death) of a familiar mammal (e.g., dog, squirrel, rabbit, deer).</i>	
<i>L.K.2.3</i>	<i>With teacher guidance, conduct a structured investigation to observe and measure (comparison of lengths) the changes in various individuals of a single plant species from seed germination to adult plant. Record observations using drawing or writing.</i>	
<i>L.K.2.4</i>	<i>Use observations to explain that young plants and animals are like but not exactly like their parents (i.e., puppies look similar, but not exactly like their parents).</i>	

## THIRD NINE WEEKS

Comp./ Obj. #	Student Objective	Date Mastered
	<b>E.K.10 Earth's Resources Conceptual Understanding:</b> Humans use Earth's resources for everything they do. Choices that humans make to live comfortably can affect the world around them. Recycling, reusing, and reducing consumption of natural resources is important in protecting our Earth's environment. Humans can make choices that reduce their impact on Earth's environment.	
<b>E.K.10</b>	<b>Students will demonstrate an understanding of how humans use Earth's resources.</b>	
<i>E.K.10.1</i>	<i>Participate in a teacher-led activity to gather, organize and record recyclable materials data on a chart or table using technology. Communicate results.</i>	
<i>E.K.10.2</i>	<i>With teacher guidance, develop questions to conduct a structured investigation to determine ways to conserve Earth's resources (i.e., reduce, reuse, and recycle) and communicate results.</i>	
<i>E.K.10.3</i>	<i>Create a product from the reused materials that will meet a human need (e.g., pencil holder, musical instrument, bird feeder). Use an engineering design process to define the problem, design, construct, evaluate, and improve the product.*</i>	
	<b>E.K.8 Earth and the Universe Conceptual Understanding:</b> Seasonal changes occur as the Earth orbits the sun. These seasonal changes repeat in a pattern. Patterns of sunrise and sunset can be described and predicted.	
<b>E.K.8A</b>	<b>Students will demonstrate an understanding of the pattern of seasonal changes on the Earth.</b>	
<i>E.K.8A.1</i>	<i>Construct an explanation of the pattern of the Earth's seasonal changes in the environment using evidence from observations.</i>	
	<b>Conceptual Understanding:</b> The sun is the source of heat and light for the solar system. This heat can impact Earth's natural resources. Living things depend upon the effects of the sun (warms the land, air, water, and helps plants grow) to survive.	
<b>E.K.8B</b>	<b>Students will demonstrate an understanding that the Sun provides the Earth with heat and light.</b>	
<i>E.K.8B.1</i>	<i>With teacher guidance, generate and answer questions to develop a simple model, which describes observable patterns of sunlight on the Earth's surface (day and night).</i>	
<i>E.K.8B.2</i>	<i>With teacher guidance, develop questions to conduct a structured investigation to determine how sunlight affects the temperature of the Earth's natural resources (e.g., sand, soil, rocks, and water).</i>	
<i>E.K.8B.3</i>	<i>Develop a device (i.e., umbrella, shade structure, or hat) which would reduce heat from the sun (temperature) using an engineering design process to define the problem, design, construct, evaluate, and improve the device.*</i>	

## FOURTH NINE WEEKS

Comp./ Obj. #	Student Objective	Date Mastered
	<p><b>P.K.5 Organization of Matter and Chemical Interactions</b></p> <p><b>Conceptual Understanding:</b> Matter exists in different states, including solid and liquid forms. Water can exist as a solid or a liquid. Solid objects can be described and sorted according to their attributes. Different properties are suited for different purposes.</p>	
<b>P.K.5A</b>	<b>Students will demonstrate an understanding of the solid and liquid states of matter.</b>	
<i>P.K.5A.1</i>	<i>Generate questions and investigate the differences between liquids and solids and develop awareness that a liquid can become a solid and vice versa</i>	
<i>P.K.5A.2</i>	<i>paper) and classify these materials by their observable characteristics (visual, aural, or natural textural) and by their physical properties (weight, volume, solid or liquid, and sink or float).</i>	
	<p><b>Conceptual Understanding:</b> Many objects can be built from a smaller set of pieces (e.g., blocks, construction sets). Most objects can be broken down into various component pieces and any piece of uniform matter (e.g., a sheet of paper, a block of wood,) can be subdivided into smaller pieces of the same material. If pieces of the original object are damaged or removed, the object may not have the same properties or work the same.</p>	
<i>P.K.5B</i>	<i>Students will demonstrate an understanding of how solid objects can be constructed from a smaller set.</i>	
<i>P.K.5B.</i>	<i>Use basic shapes and spatial reasoning to model large objects in the environment using a set of small objects (e.g., blocks, construction sets).</i>	
<i>P.K.5B.</i>	<i>Analyze a large composite structure to describe its smaller components using drawing and writing.</i>	
<i>P.K.5B.</i>	<i>Explain why things may not work the same if some of the parts are missing.</i>	

**SEPs are in life science, physical science, and Earth and space science. The SEPs are designed so that students may develop skills and apply knowledge to solve real-life problems. While presented as distinct skill sets, the eight practices intentionally overlap and interconnect as students explore the science concepts.**

**Some examples of specific skills students should develop in grades K-2 are listed below.**

1. Generate questions and investigate the differences between liquids and solids and develop awareness that a liquid can become a solid and vice versa.
2. Develop and use models to predict weather conditions associated with seasonal patterns and changes.
3. Conduct an investigation to provide evidence that vibrations create sound (e.g., pluck a guitar string) and that sound can create vibrations (e.g., feeling sound through a speaker).
4. Analyze and interpret data from observations and measurements to describe local weather conditions (including temperature, wind, and forms of precipitation)
5. Compare and measure the length of solid objects using technology and mathematical representations. Analyze and communicate findings.
6. Construct an explanation for the general pattern of change in daily temperatures by measuring and calculating the difference between morning and afternoon temperatures.
7. Obtain and evaluate informational texts and other media to generate and answer questions about water sources and human uses of clean water.