

New standards are to be introduced, and are subject to benchmark testing and SOL field testing in 2011-2012. Old standards are to be taught to mastery in 2011-2012. Full implementation of new standards in 2012-2013.

**Amherst County Public Schools
Grade K Science Pacing Guide**

Revised 2010

Nine Weeks 1	
<p>K.4</p> <p>Duration: 2 weeks</p>	<p>The student will investigate and understand that the position, motion, and physical properties of an object can be described. Key concepts include</p> <ul style="list-style-type: none"> a) colors <u>of objects</u> (red, orange, yellow, green, blue, purple, white, and black); b) shapes and forms <u>of objects</u> (circle, triangle, square, rectangle, flexible/stiff, straight/curved); c) textures and feel <u>of objects</u> (rough/smooth, hard/soft); d) relative size and weight <u>of objects</u> (big/little, large/small, heavy/light, wide/thin, long/short); and e) relative position and speed <u>of objects</u> over/under, in/out, above/below, left/right, fast/slow).
<p>K.2</p> <p>Duration: 2 weeks</p>	<p>The student will investigate and understand that humans have senses that allow them to seek, find, take in, and react or respond to information in order to learn about their surroundings. Key concepts include</p> <ul style="list-style-type: none"> a) the five senses and corresponding sensing organs; and b) sensory descriptors <u>used to describe common objects and phenomena</u>. (sweet, sour, bitter, salty, rough/smooth, hard/soft, cold, warm, hot, loud/soft, high/low, bright/dull).
<p>K.<u>9</u> (was K.8)</p> <p>Duration: All 9 weeks</p>	<p>The student will investigate and understand that there are simple repeating patterns in his/her daily life. Key concepts include</p> <ul style="list-style-type: none"> a) weather observations; b) the shapes and forms of many common natural objects including seeds, cones, and leaves; and c) animal and plant growth; and d) home and school routines
<p>K.<u>10</u> (was K.9)</p> <p>Duration: All 9 weeks</p>	<p>The student will investigate and understand that change occurs over time and rates may be fast or slow. Key concepts include</p> <ul style="list-style-type: none"> a) natural and human-made things may change over time; and b) changes can be <u>observed</u> and measured.
<p>K.1</p> <p>Duration: Ongoing all year</p>	<p>The student will <u>demonstrate an understanding of scientific reasoning, logic and the nature of science by planning and</u> conducting investigations in which</p> <ul style="list-style-type: none"> a) basic <u>characteristics or properties</u> of objects are identified by direct observation; b) observations are made from multiple positions to achieve different perspectives; c) a set of objects is sequenced according to size; d) a set of objects is separated into two groups based on a single physical <u>characteristic</u>; e) nonstandard units are used to measure <u>the length, mass, and volume</u> of common objects.

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	<ul style="list-style-type: none"> f) <u>observations and predictions are made for</u> an unseen member in a sequence of objects g) a question is developed <u>and predictions are made</u> from one or more observations h) <u>observations are recorded</u>; i) picture graphs are constructed; j) unusual or unexpected results in an activity are recognized; and k) objects are described both pictorially and verbally.
Nine Weeks 2	
K.5 Duration: 2 weeks	The student will investigate and understand that water flows and has properties that can be observed and tested. Key concepts include <ul style="list-style-type: none"> a) water occurs in different <u>phases</u> (solid, liquid, gas); b) water flows downhill; and c) some materials float in water, while others sink.
K. <u>10</u> (was K.9) Duration: All 9 weeks	The student will investigate and understand that change occurs over time and rates may be fast or slow. Key concepts include <ul style="list-style-type: none"> c) natural and human-made things may change over time; and d) changes can be <u>observed</u> and measured.
<u>K.6 - NEW</u> Duration: 2 weeks	<u>The student will investigate and understand the differences between living organisms and nonliving objects. Key concepts include</u> <ul style="list-style-type: none"> a) <u>all things can be classified as living or nonliving; and</u> b) <u>living organisms have certain characteristics that distinguish them from nonliving objects including growth, movement, response to the environment, having offspring, and the need for food, air, and water.</u>
K. <u>7</u> (was K.6) Duration: 2 weeks	The student will investigate and understand basic needs and life processes of plants and animals. Key concepts include <ul style="list-style-type: none"> a) <u>animals</u> need <u>adequate</u> food, water, <u>shelter</u>, air and <u>space</u> to survive; b) <u>plants need nutrients, water, air, light, and a place to grow to survive</u>; c) plants and animals <u>change as they grow, have varied</u> life cycles, and <u>eventually die</u>; and d) offspring of plants and animals are similar but not identical to their parents <u>or</u> to one another.
Nine Weeks 3	
K.3 Duration: 2 weeks	The student will investigate and understand that magnets have an effect on some materials, make some things move without touching them, and have useful applications: Key concepts include <ul style="list-style-type: none"> a) <u>magnetism and its effects</u>; (attraction/nonattraction, push/pull, attract/repel, and metal/nonmetal); and b) useful applications <u>of magnetism</u> (refrigerator magnet, can opener, magnetized screwdriver, and magnetic games).

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<p>K.<u>8</u> (was K.7)</p> <p>Duration: 1 week</p>	<p>The student will investigate and understand that shadows occur when light is blocked by an object. Key concepts include</p> <ul style="list-style-type: none"> a) shadows occur in nature when sunlight is blocked by an object, and b) shadows can be produced by blocking artificial light sources.
<p>K.<u>9</u> (was K.8)</p> <p>Duration: 2 weeks</p>	<p>The student will investigate and understand that there are simple repeating patterns in his/her daily life. Key concepts include</p> <ul style="list-style-type: none"> a) weather observations; b) the shapes and forms of many common natural objects including seeds, cones, and leaves; and c) animal and plant growth; and d) home and school routines.
<p>K.<u>10</u>(was K.9)</p> <p>Duration: All 9 weeks</p>	<p>The student will investigate and understand that change occurs over time and rates may be fast or slow. Key concepts include</p> <ul style="list-style-type: none"> a) natural and human-made things may change over time; and b) changes can be <u>observed</u> and measured.
Nine Weeks 4	
<p>K.<u>11</u> (was K.10)</p> <p>Duration: 1 week</p>	<p>The student will investigate and understand that materials can be reused, recycled, and conserved. Key concepts include</p> <ul style="list-style-type: none"> a) materials and objects can be used over and over again, b) everyday materials can be recycled; and c) water and energy conservation at home and in schools helps <u>ensure</u> resources <u>are available</u> for future use.
<p>K.<u>7</u> (was K.6)</p> <p>Duration: 2 weeks</p>	<p>The student will investigate and understand basic needs and life processes of plants and animals. Key concepts include</p> <ul style="list-style-type: none"> a) <u>animals</u> need <u>adequate</u> food, water, <u>shelter</u>, air and <u>space</u> to survive; b) <u>plants need nutrients, water, air, light, and a place to grow to survive</u>; c) plants and animals <u>change as they grow, have varied</u> life cycles, and <u>eventually die</u>; and d) offspring of plants and animals are similar but not identical to their parents <u>or</u> to one another.
<p>K.<u>9</u> (was K.8)</p> <p>Duration: All 9 weeks</p>	<p>The student will investigate and understand that there are simple repeating patterns in his/her daily life. Key concepts include</p> <ul style="list-style-type: none"> a) weather observations; b) the shapes and forms of many common natural objects including seeds, cones, and leaves; and c) animal and plant growth; and d) home and school routines.
<p>K.<u>10</u> (was K.9)</p>	<p>The student will investigate and understand that change occurs over time</p>

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