

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 1 Science Pacing Guide
 Revised 2010

Nine Weeks 1

1.1

Duration:
Ongoing all year

The student will demonstrate an understanding of scientific reasoning, logic and the nature of science by planning and conducting investigations in which

- a) the senses are used to observe differences in physical properties;
- b) observations are made from multiple positions to achieve a variety of perspectives and are repeated to assure accuracy;
- c) objects or events are classified and arranged according to characteristics of properties;
- d) simple tools are used to enhance observations;
- e) length, mass, volume, and temperature are measured using nonstandard units;
- f) inferences are made and conclusions are drawn about familiar objects and events;
- g) a question is developed from one or more observations;
- h) predictions are made based on patterns of observations;
- i) observations and data are recorded, analyzed, and communicated orally and with simple graphs, pictures, written statements, and numbers, and
- j) simple investigations and experiments are conducted to answer questions.

1.6

Duration:
2 weeks

The student will investigate and understand the basic relationships between the sun and Earth. Key concepts include

- a) the sun is the source of (heat) energy and light that warms the land, air, and water; and
- b) the sun's relative position in the morning is east and in the late afternoon is west.

Old b) night and day are caused by the rotation of the Earth.

Nine Weeks 2

1.7

Duration:
2 weeks

The student will investigate and understand weather and seasonal changes. Key concepts include

- a) changes in temperature, light, and precipitation affect plants and animals, including humans;
- b) there are relationships between daily and seasonal changes, and
- c) changes in temperature, light, and precipitation can be observed and recorded over time.

(Old a) plants (growth, budding, falling leaves, and wilting)
 Old b) animals (behaviors, hibernation, migration, body covering, and habitat)
 (Old c) people (dress, recreation, and work)

1.5

The student will investigate and understand that animals, including humans, have basic (life) needs and certain distinguishing characteristics. Key concepts include

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Duration: 2 weeks	<ul style="list-style-type: none"> a) <u>basic</u> life needs <u>include adequate air</u>, food, water, <u>shelter, and space (habitat)</u>; b) <u>animals, including humans, have many different</u> physical characteristics; and c) <u>animals can be classified according to a variety of characteristics</u> (wild/tame, water homes/land homes).
Nine Weeks 3	
1.2 Duration: 2 weeks	<p>The student will investigate and understand that moving objects exhibit different kinds of motion. Key concepts include</p> <ul style="list-style-type: none"> a) objects may have straight, circular, and back-and-forth motions; b) objects may vibrate and produce sound; and c) pushes or pulls can change the movement of an object. <p><u>(Old d the motion of objects may be observed in toys and in playground activities)</u></p>
1.3 Duration: 1 week	<p>The student will investigate and understand how different common materials interact with water. Key concepts include</p> <ul style="list-style-type: none"> a) some liquids will separate when mixed with water, but others will not; b) some solids will dissolve in water, but others will not; and c) some substances will dissolve more readily in hot water than in cold water.
Nine Weeks 4	
1.4 Duration: 2 weeks	<p>The student will investigate and understand that plants have <u>basic</u> life needs and functional parts and can be classified according to certain characteristics. Key concepts include</p> <ul style="list-style-type: none"> a) <u>plants</u> need <u>nutrients</u> (“food”), air, water, light, and a place to grow; b) <u>basic parts of plants</u> (seeds, roots, stems, leaves, blossoms, flowers, and fruits); and c) <u>plants can be classified based on a variety of</u> characteristics (edible/nonedible, flower/nonflowering, evergreen/deciduous).
1.8 Duration: 2 weeks	<p>The student will investigate and understand that natural resources are limited. Key concepts include</p> <ul style="list-style-type: none"> a) identification of natural resources (plants and animals, water, air, land, minerals, forests, and soil) b) factors that affect air and water quality; and c) recycling, reusing, and reducing consumption of natural resources.