Prince George County Public Schools
Fifth Grade Science Pacing Guide

SOLs should be taught so that each student will have mastered that particular SOL by the end of the nine week period. The skills listed in each nine weeks will be assessed.

First Nine Weeks

The student will…

*5.1… demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which

a) items such as rocks, minerals, and organisms are identified using various classification keys;
b) estimates are made and accurate measurements of length, mass, volume, and temperature are made in metric units using proper tools;
c) estimates are made and accurate measurements of elapsed time are made using proper tools;;
d) hypotheses are formed from testable questions
e) independent and dependent variables are identified;
f) constants in an experimental situation are identified;
g) data are collected, recorded, analyzed and communicated using proper graphical representations and metric measurements;
h) predictions are made using patterns from data collected and simple graphical data are generated;
i) inferences are made and conclusions are drawn;
j) models are constructed to clarify explanations demonstrate relationships, and solve needs;
k) current applications are used to reinforce science concepts

5.2…investigate and understand how sound is created and transmitted and how it is used Key concepts include

a) compression waves;
b) vibration, compression, wavelength, frequency, amplitude;
c) the ability of different media to transmit sound; and
d) uses and applications of sound waves

5.4…investigate and understand that matter is anything that has mass, takes up space, and occurs as a solid, liquid, or gas. Key concepts include

a) distinguishing properties of each phase of matter
b) the effects of temperature on the phases of matter
c) atoms and elements;
d) molecules and compounds; and
e) mixtures including solutions

*** 5.1 Embedded throughout year**

Second Nine Weeks

The student will…

5.3…investigate and understand basic characteristics of visible light and how it behaves. Key concepts include

a) transverse waves
b) the visible spectrum;
c) opaque, transparent, and translucent;
d) reflection of light from reflective surfaces;
e) refraction of light through water and prisms

5.7…investigate and understand how the Earth's surface is constantly changing. Key concepts include

a) identification of rock types;
b) the rock cycle and how transformations between rocks occur;
c) Earth history and fossil evidence;
d) the basic structure of the Earth's interior;
e) changes in Earth's crust due to plate tectonics;
f) weathering, erosion and deposition; and
g) human impact.

Third Nine Weeks

The student will…

5.6…investigate and understand characteristics of the ocean environment. Key concepts include

a) geological characteristics;
b) physical characteristics; and
c) ecological characteristics

5.5…investigate and understand that organisms are made of one or more cells and have distinguishing characteristics that play a vital role in the organism's ability to survive and thrive in its environment. Key concepts include

a) basic cell structures and functions;
b) classification or organisms using physical characteristics, body structure, and behavior of the organism
c) traits of organisms that allow them to survive in their environment

Fourth Nine Weeks

Review For SOL Assessment

<u>Fourth grade science objectives should be reviewed throughout the year since the SOL assessment is cumulative (includes grade 4 and grade 5 objectives). Fourth grade objectives are not included on benchmark assessments.</u>