

SENECA VALLEY SCHOOL DISTRICT

CURRICULUM

Course Title:	Science
Grade Level(s):	1
Periods Per Week:	5
Length of Period:	40 Minutes
Length of Course:	2 nd and 3 rd Trimester
Faculty Author(s):	Karen Kaiser, Amber Kelly, Tammy McKenry, Nichole Brandon
Date:	February 25, 2015

COURSE DESCRIPTION:

Science instruction in the Seneca Valley School District will be based on the inquiry learning process using a developmentally appropriate method. The First Grade Science Curriculum will integrate the following components; Life Science, Earth Science, and Physical Science. Using the STC Solids and Liquids and Organisms Modules students will be engaged in the inquiry based learning process where they will communicate their thoughts and ideas both orally and in written form.

The state has developed anchors (points of focus) in Science. The anchors specify eligible content for the content areas. The anchors include standards 1.1, 1.2, and 1.3

The Objectives that address anchors have been bolded.

The following outline provides a general overview of the course content, not a chronological timetable. The weeks denoted for each area provide an idea for the overall time spent working with a given topic throughout the school year.

COURSE OUTLINE	OBJECTIVES (PA standard)			
<p>I. Life Science</p> <p>A. Organisms</p> <ol style="list-style-type: none"> 1. Characteristics of organisms 2. Life cycles of organisms 3. Organisms and their environments 4. Changes in the environment 	<p>Recognize differences between living and nonliving. S4.A.3.1.2</p> <p>Identify and compare the living and nonliving parts of an ecosystem. S4.A.3.1.2</p> <p>Identify components of the agricultural system. S4.A. 3.1.4</p> <p>Identify the purpose of models. S4.A.3.2.1</p> <p>Use models to identify how systems work. S4.A.3.2.3</p> <p>Use materials and construct models to demonstrate a system. S4.A.3.2.3</p> <p>Identify observable patterns. S4.A. 3.3.1</p> <p>Make predictions based on observations. S4.A.3.3.2</p> <p>Identify the differences of living things. S4.B.1.1.1</p> <p>Compare characteristics of organisms. S4.B. 1. 2.1</p> <p>Identify the basic needs of living things. S4.B.1.1.3</p> <p>Recognize the needs of living things. S4.B.1.1.4</p> <p>Recognize and compare the differences between the life cycles of organisms. S4.B. 1.1.5</p> <p>Recognize that plants and animals have different characteristics for survival in their environment. S4.B.2.1</p> <p>Explain how specific adaptations help organisms survive. S4.B.2.2.2</p> <p>Identify offspring have physical characteristics that resemble their parents. S4.B. 2.2.1</p>			

COURSE OUTLINE	OBJECTIVES (PA standard)			
<p>B. Scientific Inquiry</p> <ol style="list-style-type: none"> 1. Comparing similarities and difference 2. Predicting, questioning, observing, discussing, writing & applying 	<p>Identify and explain facts and opinions. S4.A.1.1.1</p> <p>List, compare, and contrast technological changes, past and present. (Social Studies) S4.A.1.1.2</p> <p>Make, compare, report, and record observations based on models or through experimentation. S4.A.1.1.3</p> <p>Observe, describe illustrate, or write how things change. S4.A.1.3.1</p> <p>Recognize size, distance, or motion. S4.A.1.3.2</p> <p>Identify that physical changes have an effect on objects. S4.A.1.3</p> <p>Recognize that changes in the environment have an effect on a living organism. S4.A.1.3.4</p> <p>Describe how human behaviors impact the environment. S4.A.1.3.5</p> <p>Develop strategies to formulate questions that can be answered with scientific experiments using one variable. S4.A.2.1.2</p> <p>Observe natural phenomenon and record observations. S4.A.2.1.3</p> <p>Draw conclusions based on data or information collected. S4.A.2.1.4</p> <p>Tell the purpose of tools or instruments used in experiments. S4.A.2.1.5</p>			

COURSE OUTLINE	OBJECTIVES (PA standard)			
<p>II. Earth Science</p> <p>A. Organisms</p> <ol style="list-style-type: none"> 1. Contents of soil 2. Parts of soil 3. Living things need soil <p>B. Scientific Inquiry</p> <ol style="list-style-type: none"> 1. Comparing similarities and difference. 2. Predicting, questioning, observing, discussing, writing & applying. 	<p>Identify the living and nonliving components of a local ecosystem. S4.B.3.1.1</p> <p>Describe how living things are dependent on nonliving things for survival. S4.B.3.1.2</p> <p>List ways living things change when its habitat is altered. S4.B.3.2.1</p> <p>Observe and list changes in the environment and their effect. S4.B.3.2.2</p> <p>Describe how seasons affect living things. S4.B.3.2.3</p> <p>Construct a model of a woodland terrain. S4.D.1.1.2</p> <p>Recognize the components of soil. S4.D.1.1.3</p> <p>Identify that water has many uses and list its benefits to humans. S4.D.1.2.3</p> <p>Recognize that water can be a solid or liquid. S4.D.1.3.3</p> <p>Conduct experiments to observe how water moves. S4.D.1.3.4</p> <p>Identify and explain facts and opinions. S4.A.1.1.1</p> <p>List, compare, and contrast technological changes, past and present. S4.A.1.1.2</p> <p>Make, compare, report, and record observations based on models or through experimentation. S4.A.1.1.3</p> <p>Observe, describe illustrate, or write how things change. S4.A.1.3.1</p> <p>Recognize size, distance, or motion. S4.A.1.3.2</p> <p>Identify that physical changes have an effect on objects. S4.A.1.3</p>			

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