TREASURE COAST SCIENCE SCOPE AND SEQUENCE

The History:

The scope and sequence is framed around the Next Generation Sunshine State Standards (NGSSS) that were adopted by the Department of Education in February 2008. Prior to the adoption of the NGSSS, teachers of science utilized the 1996 Sunshine State Standards (SSS) to deliver instruction. Those previous standards were considered a mile wide and an inch deep, and truly lacked the depth and breadth of deep science content. The Office of Math and Science (DOE) stated that new standards were needed because of three main reasons: low student performance on state, national, and international achievement measures; persistent achievement gaps among demographic subgroups; lack of preparation of graduating seniors for post-secondary education and the workforce.

Scope and Sequence:

The scope and sequence is a document that maps the standards (what needs to be taught) in a sequence (when it should be taught). The Treasure Coast Science Scope and Sequence is arranged by topics of study and infuses Nature of Science benchmarks throughout each topic. Each grade level/course will spend some time during the first quarter of the school year to present an overview of scientific thinking and the science project (research and documentation) process. This topic of study at the K2 level is called “Doing Science, at the 3-5 level it is called “Thinking Like a Scientist, at the 6-8 level it is called “Thinking and Working Like a Scientist”, and at the 9-12 level it is called “Approaches to Science”. The expectations spiral through grade bands with the culmination of open inquiry at the high school level.

Each topic of study is formulated around essential questions which act as a foundation and go to the heart of the topic of study. The first column of the scope and sequence lists the state assigned benchmarks for the grade/course. The second column outlines the content of the benchmarks. The third column lists numerous student friendly objectives that are aligned to the content of the benchmarks. At the end of each objective is a roman numeral in parenthesis that corresponds to a particular section of column two.

Resources:

Each topic of study also has identified resources to be utilized to deliver instruction on the concepts. Resources include: sample 5E lessons, inquiry activities, common labs, videos, formative assessments, virtual fieldtrip sites, professional development-content and pedagogy links for teachers, scientist connection links, science project ideas’ links, and links for cross-curricular connections.

St. Lucie County Public Schools Scope and Sequence 2012-2013

Course: K **Course Code: 5020010** **Quarter: 1**

Topic of Study: Doing Science

Big Ideas: 1. The Practice of Science 8. Properties of Matter 14. Organization and Development of Living Organisms

Essential Questions: How do we use our senses? How do we use Science skills? How do we use Science tools?

Optional Teacher Background: ScienceSaurus- Scientific Investigation

RESOURCES **SCIENCE CENTER**

Vocabulary: touch, smell, hear, see, taste, observe, compare, measure, sort, hand lens, magnifying glass, thermometer, measuring cup, balance, ruler

Common Inquiry Labs:

- *Science Fusion* Inquiry Flipchart "What Is in the Bag?" p.13
- *Science Fusion* Inquiry Flipchart "Use Science Skills" p.2
- *Science Fusion* Inquiry Flipchart "Use Science Tools" p.3

Science Songs- Track 13

	Technology Links:	
Lab Assistance: Daily Inquiries Body Systems	**Science Links:** www.Thinkcentral.com Graphic Organizers and Strategies	**Online Guides:** Above Level On Level Below Level

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NGSS	Content	Targets
SC.K.N.1.1 Collaborate with a partner to collect information. Cognitive Complexity: **Low** SC.K.N.1.2 Make observations of the natural world and know that they are descriptors collected using the five senses. Cognitive Complexity: **Moderate** SC.K.N.1.3 Keep records as appropriate- such as pictorial records- of investigations conducted. Cognitive Complexity: **Moderate** SC.K.N.1.4 Observe and create a visual representation of an object which includes its major features. Cognitive Complexity: **High** SC.K.N.1.5 Recognize that learning can come from careful observation. Cognitive Complexity: **Moderate** SC.K.14.1 Recognize the five senses and related body parts. Cognitive Complexity: **Low** SC.K.P.8.1 Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture. Cognitive Complexity: **Moderate**	How do we use our senses? ▪ Touch ▪ Smell ▪ Hear ▪ See ▪ Taste How do we use Science skills? ▪ Observe ▪ Measure ▪ Compare ▪ Sort How do we use Science tools? ▪ Hand lens ▪ Thermometer ▪ Measuring cup ▪ Balance ▪ Ruler	▪ Identify and describe the five senses. ▪ Use the five senses to observe and learn about the world. ▪ Identify the sensory organ associated with each sense. ▪ Observe many properties of one thing. ▪ Observe and describe things. ▪ Pose questions about things and surroundings. ▪ Identify science processes. ▪ Demonstrate how science processes can be used to describe things and investigate questions. ▪ Identify science tools. ▪ Recognize how science tools help in investigations. ▪ Use a hand lens, a measuring cup, a thermometer, a balance, and a ruler to help analyze thing. ▪ Describe safe ways to conduct investigations. .

St. Lucie County Public Schools Scope and Sequence 2012-2013

Course: K **Course Code: 5020010** **Quarter: 1**

Topic of Study: Animals

Big Ideas: 14. Organization and Development of Living Organisms

Essential Questions: What are living things? What is real? What is pretend? What are animals like? What do animals need? How do animals grow and change?

Vocabulary: touch, smell, hear, see, taste, observe, compare, measure, sort, hand lens, magnifying glass, thermometer, measuring cup, balance, ruler

Common Inquiry Labs:

- *Science Fusion* Inquiry Flipchart "Sort Living and Nonliving Things" p. 4
- *Science Fusion* Inquiry Teacher Edition "Real or Pretend" p. 53
- *Science Fusion* Inquiry Flipchart "Sort Animals" p.5

Science Songs- Tracks 1 and 2

NGSS	Content	Targets
SC.K.L.14.2 Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life. Cognitive Complexity: **Moderate** SC.K.L.14.3 Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do. Cognitive Complexity: **Moderate**	What are living things? ▪ Nonliving things ▪ Living things What is real? What is pretend? ▪ Real ▪ Pretend What are animals like? ▪ Fur ▪ Feather ▪ Scales What do animals need? ▪ Food ▪ Air ▪ Water ▪ Shelter How do animals grow and change? ▪ Life cycle	▪ Describe characteristics of living things. ▪ Describe characteristics of nonliving things. ▪ Sort living and nonliving things. ▪ Recognize that some books and other media portray animals and plants with characteristics that they do not have in real life. ▪ Identify characteristics of real animals and plants and pretend animals and plants. ▪ Compare real animals and plants and pretend animals and plants. ▪ Compare animals by size, shape, or body coverings. ▪ Observe and describe similarities and differences in the appearance of animals. Identify ways animals move.