

Dear 2nd Grade Science Teacher:

The goal of the North Carolina Science Standard Course of Study (NC SCoS) is to achieve scientific literacy. The Second Grade Science Pacing Guide includes **Essential Standards and Clarifying Objectives** from *life, physical and earth sciences*. These standards engage students in developing problem-solving and critical thinking skills that empower them to participate in an increasingly scientific and technological world.

Second Graders Value Science Best When...

- Science is taught *daily* (30 to 45 minutes).
- Learning opportunities develop understandings and skills for problem-solving in real-world scientific and technological concepts.
- The collaborative scientific contributions of individuals from all ethnic origins are recognized and valued.
- Math and reading skills are infused into science.
- *Inquiry skills* and positive attitudes are modeled by the teacher and others involved in the education process.
- *A variety of presentation modes* are used to accommodate different learning styles; students are given opportunities to interact and share ideas and collaborate with their peers.

Second Graders Learn Science Best When...

- ✓ Involved in first-hand exploration & investigation and inquiry/processing skills are nurtured.
- ✓ Instruction builds directly on student' conceptual background.
- ✓ Science content is organized on the basis of broad conceptual themes common to all science disciplines.
- ✓ Mathematics and communication skills are an integral part of science instruction.
- ✓ Learning environment fosters positive attitudes towards self and society, as well as science.

Suggested Instructional Model: (I Do; We Do; You Do)

- **I Do: Engage** --Introduce science concept and connect to student's' prior knowledge; revealing any misconceptions.
- **We Do: Explore** --Provide an opportunity for observations and questioning prior to teacher's explaining of concepts.
- **I Do: Explain/Elaborate** -- Provide a clear, concise description of new concept; include labels & essential vocabulary; integrate video clip. Demonstrate the concept and/or process using visual models, technology, and text
- **We Do: Evaluate** --Assess Hands-on/Minds-on practice through guided practice
- **You Do: Evaluate**—Determine students' overall understanding of concepts and their progress made towards learning the science objectives.

Charting a New Course!

Halifax County Schools

2018-2019 Curriculum & Instruction Support Team

Halifax County Schools: Science Essential Standards Pacing Guide

2nd Grade At-A-Glance NC Wiki: http://www.livebinders.com/play/play_or_edit/217643

Force and Motion					Matter: Properties and Changes				
2.P.1-Understand the relationship between sound and vibrating objects.	Quarters				2.P.2- Understand properties of solids and liquids and the changes they undergo.	Quarters			
	1	2	3	4		1	2	3	4
2.P.1.1 Illustrate how sound is produced by vibrating objects and columns of air.	X	2	X	X	2.P.2.1 Give examples of matter that change from a solid to a liquid and from a liquid to a solid by heating and cooling.	X	X	3	X
2.P.1.2 Summarize the relationship between sound and objects of the body that vibrate – eardrum and vocal cords.	X	2	X	X	2.P.2.2 Compare the amount (volume and weight) of water in a container before and after freezing.	X	X	3	X
					2.P.2.3 Compare what happens to water left in an open container over time as to water left in a closed container.	X	X	3	X
Earth Systems, Structures and Processes					Structures and Functions of Living Organisms				
2.E.1- Understand patterns of weather and factors that affect weather.	Quarters				2.L.1 -Understand animal life cycles.	Quarters			
	1	2	3	4		1	2	3	4
2.E.1.1 Summarize how energy from the sun serves as a source of light that warms the land, air and water.	1	X	X	X	2.L.1.1 Summarize the life cycle of animals: - Birth - Developing into an adult - Reproducing - Aging and death	X	X	X	4
2.E.1.2 Summarize weather conditions using qualitative and quantitative measures to describe: - Temperature - Wind direction - Wind speed - Precipitation	1	X	X	X	2.L.1.2 Compare life cycles of different animals such as, but not limited to, mealworms, ladybugs, crickets, guppies or frogs.	X	X	X	4

2.E.1.3 Compare weather patterns that occur over time and relate observable patterns to time of day and time of year.	1	X	X	X	2.L.2- Remember that organisms differ from or are similar to their parents based on the characteristics of the organism.	Quarters			
						1	2	3	4
2.E.1.4 Recognize the tools that scientists use for observing, recording, and predicting weather changes from day to day and during the seasons.	1	X	X	X	2.L.2.1 Identify ways in which many plants and animals closely resemble their parents in observed appearance and ways they are different.	X	X	X	4
Note: The Science and Engineering Practices listed below are to be integrated in daily lesson activities as often as possible: - Asking questions and defining problems - Developing and using models - Planning and carrying out investigations - Analyzing and interpreting data - Using mathematics and computational thinking - Constructing explanations and designing solutions - Engaging in argument from evidence - Obtaining, evaluating and communicating information					2.L.2.2 Recognize that there is variation among individuals that are related.	X	X	X	4

