Public Schools of North Carolina
State Board of Education | Department of Public Instruction

This document is designed to help North Carolina educators teach the Essential Standards (Standard Course of Study). NCDPI staff are continually updating and improving these tools to better serve teachers.

Second Grade Science
2009-to-2004 Standards Crosswalk

This document is a general comparison of the current 2004 Science Standard Course of Study and the new 2009 Science Essential Standards. It provides initial insight into sameness and difference between these two sets of standards. This document is not intended to answer all questions about the nuance of the new standards versus the old - in fact, we imagine you will develop questions as you do a close reading of the new standards. Please send the science section of NC DPI any thoughts, feedback, questions and ideas about additional resources that would help you start preparing to teach the Essential Standards. Email Beverly Vance at bvance@dpi.state.nc.us.

Important Note: The current 2004 SCOS will continue to be the operational standards in the 2010-11 and 2011-12 school years as resource materials are developed to support the new Science Essential Standards, professional development is conducted and assessments are designed to align to the new Science Essential Standards. We expect the new Essential Standards to be taught and assessed in schools for the first time in the 2012-13 school year. That said, we are providing Essential Standards resources now and over the next two-years so that schools and teachers can get a head start on internalizing and planning to teach the new standards.

2009 Essential Standards			**2004 NC SCOS**			
Strand	Objective	**Essential Standard** Text of Clarifying objective	Goal	Objective	Text of objective	Comments
Physical Science: Forces and Motion		**Understand the relationship between sound and vibrating objects.**	Concepts of Sound	4.01	Demonstrate how sound is produced by vibrating objects and vibrating columns of air.	
	2.P.1.1	Illustrate how sound is produced by vibrating objects and columns of air.				
	2.P.1.2	Summarize the relationship between sound and objects of the body that vibrate – eardrum and vocal cords.		4.04	Show how the human ear detects sound by having a membrane that vibrates when sound reaches it.	

2009 Essential Standards			2004 NC SCOS			Comments
Strand	Objective	**Essential Standard** Text of Clarifying objective	Goal	Objective	Text of objective	
				4.05	Observe and describe how sounds are made by using a variety of instruments and other "sound makers" including the human vocal cords.	
Physical Science: Matter: Properties and Change		**Understand properties of solids and the changes they undergo.**	Changes in Properties	3.01	Identify three states of matter: • Solid • Liquid	• Gas Not addressed in this standard
	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.		3.02	Observe changes in state due to heating and cooling of common materials.	
	2.P.2.2	Compare the amount (volume and weight) of water in a container before and after freezing.				
	2.P.2.3	Compare what happens to water left in an open container over time as to water left in a closed container.				
Earth Science: Earth Systems, Structures and Processes		**Understand patterns of weather and factors that affect weather.**	Changes in Weather	2.05	Discuss and determine how energy from the sun warms the land, air and water.	
	2.E. 1.1	Summarize how energy from the sun serves as a source of light that warms the land, air and water.				
	2.E.1.2	Summarize weather conditions using qualitative and quantitative measures to describe: • Temperature • Wind direction • Wind speed • Precipitation		2.01	Investigate and describe how moving air interacts with objects.	
				2.03	Describe weather using quantitative measures of: • Temperature • Wind direction • Wind speed • Precipitation	

2009 Essential Standards			2004 NC SCOS			
Strand	Objective	**Essential Standard** Text of Clarifying objective	Goal	Objective	Text of objective	Comments
	2.E.1.3	Compare weather patterns that occur over time and relate observable patterns to time of day and time of year.		2.06	Observe and record weather changes over time and relate to time of day and time of year.	
	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.		2.04	Identify and use common tools to measure weather: • Wind vane and anemometer • Thermometer • Rain gauge	
Life Science: Structures and Functions of Living Organisms	**Understand animal life cycles.**		Animal Life Cycles	1.01	Describe the life cycle of animals including: • Birth • Developing into an adult • Reproducing • Aging and death	Moved 1.02 to first grade 1.L.1.1
	2.L.1.1	Summarize the life cycle of animals including: • Birth. • Developing into an adult • Reproducing • Aging and death				
	2.L.1.2	Compare life cycles of different animals such as, but not limited to, mealworms, ladybugs, crickets, guppies or frogs.		1.03	Observe the different stages of an insect life cycle.	
				1.04	Compare and contrast life cycles of other animals such as mealworms, ladybugs, crickets, guppies or frogs.	
Life Science: Evolution and Genetics	**Remember that organisms differ from or are similar to their parents based on the characteristics of the organism.**					
	2.L.2.1	Identify ways in which many plants and animals closely resemble their parents in observed appearance and ways they are different.				
	2.L.2.2	Recognize that there is variation among individuals that are related.				

Objective 1.02 not addressed
Objective 2.02 not addressed
Objective 3.03 not addressed
Objective 3.04 not addressed
Objective 3.05 not addressed
Objective 3.06 not addressed
Objective 4.02 not addressed
Objective 4.03 not addressed