



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.

Third 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			Comments
Strand	Objective	Essential Standard	Goal	Objective	Text of objective	
Physical Science: Forces and Motion		Understand motion and factors that affect motion.				Required for 2009 NAEP
	3.P.1.1	Infer changes in speed or direction resulting from forces acting on an object.				
	3.P.1.2	Compare the relative speeds (faster or slower) of objects that travel the same distance in different amounts of time.				

2009 Essential Standards			2004 NC SCOS			
Strand	Objective	Essential Standard	Goal	Objective	Text of objective	Comments
		Text of Clarifying objective				
	3.P.1.3	Explain the effect of earth's gravity on the motion of any object on or near the earth.				
Physical Science: Matter: Properties and Change	Understand the structure and properties of matter before and after they undergo a change.					Required for 2009 NAEP
	3.P.2.1	Recognize that air is a substance that surrounds us, takes up space and has mass.				
	3.P.2.2	Compare solids, liquids, and gases based on their basic properties.				
	3.P.2.3	Summarize changes that occur to the observable properties of materials when different degrees of heat are applied to them, such as melting ice or ice cream, boiling water or an egg, or freezing water.				
Physical Science: Energy Conservation and Transfer	Recognize how energy can be transferred from one object to another.					
	3.P.3.1	Recognize that energy can be transferred from one object to another by rubbing them against each other.				
	3.P.3.2	Recognize that energy can be transferred from a warmer object to a cooler one by contact or at a distance and the cooler object gets warmer.				

2009 Essential Standards			2004 NC SCOS			
Strand	Objective	Essential Standard	Goal	Objective	Text of objective	Comments
		Text of Clarifying objective				
Earth Science: Earth in the Universe	Recognize the major components and patterns observed in the earth/moon/sun system.		Earth/Moon/Sun System	3.02	Observe that objects in the sky have patterns of movement including: <ul style="list-style-type: none"> • Sun • Moon • Stars 	
	3.E.1.1	Recognize that the earth is part of a system called the solar system that includes the sun (a star), planets, and many moons and the earth is the third planet from the sun in our solar system.				
	3.E.1.2	Recognize that changes in the length and direction of an object’s shadow indicate the apparent changing position of the Sun during the day although the patterns of the stars in the sky, to include the Sun, stay the same.				
3.03	Using shadows, follow and record the apparent movement of the sun in the sky during the day.					
			3.06	Observe that patterns of stars in the sky stay the same, although they appear to move across the sky nightly.		
Earth Science: Earth Systems, Structures and Processes	Compare the structures of the Earth’s surface using models or three-dimensional diagrams.					
	3.E.2.1	Compare Earth’s saltwater and freshwater features (including oceans, seas, rivers, lakes, ponds, streams, and glaciers).				
	3.E.2.2	Compare Earth’s land features (including volcanoes, mountains, valleys, canyons, caverns, and islands) by using models, pictures, diagrams, and maps.				

2009 Essential Standards			2004 NC SCOS			Comments
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Life Science: Structures and Functions of Living Organisms	3.L.1.1	Understand human body systems and how they are essential for life: protection, movement and support.	Form and Function of the Skeletal Muscle Systems of the Human Body	4.01	Identify the skeleton as a system of the human body.	
		Compare the different functions of the skeletal and muscular system.		4.02	Describe several functions of bones: <ul style="list-style-type: none"> • Support • Protection • Locomotion 	
				4.03	Describe the functions of different types of joints: <ul style="list-style-type: none"> • Hinge • Ball and socket • Gliding 	
4.04				Describe how different kinds of joints allow movement and compare this to the movement of mechanical devices.		
4.05				Observe and describe how muscles cause the body to move.		
3.L.1.2	Explain why skin is necessary for protection and for the body to remain healthy.					
Life Science: Ecosystems	3.L.2.1	Understand how plants survive in their environments.				
		Remember the function of the following plant structures as it relates to the survival of plants in their environment:(Roots – absorb nutrients; Stems – provide support; Leaves – synthesize food; Flowers – attract pollinators and produce seeds for reproduction)				
3.L.2.2		Explain how environmental conditions determine how well plants survive and grow.	Plant Growth and	1.01	Observe and measure how the quantities and qualities of nutrients, light, and water in the environment affect plant growth.	
				1.02	Observe and describe how environmental conditions determine how well plants survive and grow in a particular environment.	

2009 Essential Standards			2004 NC SCOS			
Strand	Objective	Essential Standard	Goal	Objective	Text of objective	Comments
		Text of Clarifying objective				
	3.L.2.3	Summarize the distinct stages of the life cycle of seed plants.		1.03	Investigate and describe how plants pass through distinct stages in their life cycle including. <ul style="list-style-type: none"> • Growth • Survival • Reproduction 	
				1.06	Observe, describe and record properties of germinating seeds.	
	3.L.2.4	Explain how the basic properties (texture and capacity to hold water) and components (sand, clay and humus) of soil determine the ability of soil to support the growth and survival of many plants.	Soil Properties	2.01	Observe and describe the properties of soil: <ul style="list-style-type: none"> • Color • Texture • Capacity to hold water 	
				2.02	Investigate and observe that different soils absorb water at different rates.	
				2.03	Determine the ability of soil to support the growth of many plants, including those important to our food supply.	
				2.04	Identify the basic components of soil: <ul style="list-style-type: none"> • Sand • Clay • Humus 	

- Objective 1.04 not addressed**
- Objective 1.05 not addressed**
- Objective 2.05 not addressed**
- Objective 2.06 not addressed**
- Objective 3.01 not addressed**
- Objective 3.04 not addressed**
- Objective 3.05 not addressed**