Hoke County Schools

6th-8th Grade Science Collaborative Instructional Framework

The HCS Collaborative Instructional Framework was created in a collaborative process involving teachers in Hoke County Schools and Curriculum & Instruction. This Instructional Framework is designed to align with NCDPI Unpacking Documents and any middle school NC Check-ins. The framework includes instructional support and suggested pacing and sequencing of units. More instructional support has been provided by merging and adapting the Science Resource for Instruction (SRI) to the Collaborative Pacing Guides Units for Instruction. The purpose of this document is to increase student achievement by ensuring educators understand specifically what each standard means a student must know, understand and be able to do.

Note on Numbering: Physical Science (P) Earth Science (E) Life Science (L)

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6th Grade Science	7th Grade Science	8th Grade Science
☐ **Unit 1** - The Scientific Method	☐ **Unit 1**- The Scientific Method/Lab Safety	☐ This is an EOG Course with NC Check-ins
----------Physical Science----------	----------Physical Science----------	----------Earth Science----------
☐ Unit 2 - Matter Properties and Changes	☐ Unit 2- Force and Motion	☐ Unit 1 - The Hydrosphere
☐ Unit 3 - Energy: Conservation and Transfer	☐ Unit 3 - Graphical Representation	☐ Unit2- Earth History
☐ Unit 4 - Waves and Energy (F&M)	☐ Unit 4- Energy and Simple Machines	----------Physical Science----------
----------Earth Science----------	----------Earth Science----------	☐ Unit 3 - Properties of Matter
☐ Unit 5 - Earth in the Universe	☐ Unit 5- Atmospheric Conditions	☐ Unit 4- Energy
☐ Unit 6 - Earth: Structures, Systems, and Processes	☐ Unit 6- Weather Patterns and Conditions	----------Life Science----------
----------Life Science----------	☐ Unit 7- Human Impact and Health	☐ Unit 5 - Diversity of Life
☐ Unit 7- Living Organisms: Structures & Functions	----------Life Science----------	☐ Unit 6 - Biotechnology
☐ Unit 8- Ecosystems: Terrestrial and Aquatic	☐ Unit 8- Cells	☐ Unit 7 - Health and Disease
	☐ Unit 9- Human Body Systems	☐ Unit 8 - Ecosystems
	☐ Unit 10- Genetics	

Earth Science Essential Standards

Earth in the Universe ☐ NCES.6.E.1 Understand the earth/moon/sun system, and the properties, structures, and predictable motions of celestial bodies in the Universe. Earth Systems, Structures and Processes ☐ NCES.6.E.2 Understand the structure of the earth and how interactions of constructive and destructive forces have resulted in changes in the surface of the Earth over time and the effects of the lithosphere on humans.	Earth Systems, Structures, and Processes ☐ NCES.7.E.1 Understand how the cycling of matter (water and gases) in and out of the atmosphere relates to Earth's atmosphere, weather, and climate and the effects of the atmosphere on humans.	Earth Systems, Structures, and Processes ☐ NCES.8.E.1 Understand the hydrosphere and the impact of humans on local systems and the effects of the hydrosphere on humans. Earth History ☐ NCES.8.E.2 Understand the history of Earth and its life forms based on evidence of change recorded in fossil records and landforms.

Life Science Essential Standards

Structures and Functions of Living Organisms ☐ NCES.6.L.1 Understand the structures, processes and behaviors of plants that enable them to survive and reproduce. Ecosystems ☐ NCES.6.L.2 Understand the flow of energy through ecosystems and the responses of populations to the biotic and abiotic factors in their environment.	Structures and Functions of Living Organisms ☐ NCES.7.L.1 Understand the processes, structures and functions of living organisms that enable them to survive, reproduce and carry out the basic functions of life. Evolution and Genetics ☐ NCES.7.L.2 Understand the relationship of the mechanisms of cellular reproduction, patterns of inheritance and external factors to potential variation and survival among offspring.	Structures and Functions of Living Organisms ☐ NCES.8.L.1 Understand the structure and hazards caused by agents of disease that affect living organisms. ☐ NCES.8.L.2 Understand how biotechnology is used to affect living organisms. Ecosystems ☐ NCES.8.L.3 Understand how organisms interact with and respond to the biotic and abiotic components of their environment. Evolution and Genetics ☐ NCES.8.L.4 Understand the evolution of organisms and landforms based on evidence, theories and processes that impact the Earth over time. Molecular Biology ☐ NCES.8.L.5 Understand the composition of various substances as it relates to

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		their ability to serve as a source of energy and building materials for growth and repair of organisms.

Physical Science Essentials Standards

Forces and Motion ☐ NCES.6.P. 1 - Understand the properties of waves and the wavelike property of energy in earthquakes, light and sound. **Matter: Properties and Change** ☐ NCES.6.P.2 - Understand the structure, classifications and physical properties of matter. **Energy: Conservation and Transfer** ☐ NCES.6.P.3 Understand characteristics of energy transfer and interactions of matter and energy.	**Forces and Motion** ☐ NCES.7.P.1 Understand motion, the effects of forces on motion and the graphical representations of motion. **Energy: Conservation and Transfer** ☐ NCES.7.P.2 Understand forms of energy, energy transfer and transformation and conservation in mechanical systems.	**Matter: Properties and Change** ☐ NCES.8.P.1 Understand the properties of matter and changes that occur when matter interacts in an open and closed container. **Energy: Conservation and Transfer** ☐ NCES.8.P.2 Explain the environmental implications associated with the various methods of obtaining, managing and using energy resources.

2022-2023 Testing Windows and Standards

8th Grade Science NC Check-ins
Test Specifications

Check- in #1 October 31 - November 10	Check-in #2 January 30 - February 10	Check-in #3 April 17 - April 28
Earth Science (24 Items)	Physical Science (24 Items)	Life Science (30 Items)
☐ 8.E.1.1	☐ 8.E.1.4	☐ 8.P.1.1 ☐ 8.P.1.4	☐ 8.L.1.1 ☐ 8.L.3.3
☐ 8.E.1.2	☐ 8.E.2.1	☐ 8.P.1.2 ☐ 8.P.2.1	☐ 8.L.1.2 ☐ 8.L.4.1
☐ 8.E.1.3	☐ 8.E.2.2	☐ 8.P.1.3 ☐ 8.P.2.2	☐ 8.L.2.1 ☐ 8.L.4.2
			☐ 8.L.3.1 ☐ 8.L.5.1
			☐ 8.L.3.2 ☐ 8.L.5.2