Program Guide for Mississippi Science

Conceptual Academy for Foundations of Biology, Biology, Chemistry, Earth and Space Science, Physics, Physical Science







Curriculum Scope and Sequence for MCCR Standards for Science

The Conceptual Academy materials cover six courses with the corresponding program title in the table below.

Approved Courses for the Secondary Schools of Mississippi	Conceptual Academy Program Name
Foundations of Biology	Conceptual Academy Biology
Biology	Conceptual Academy Biology
Chemistry	Conceptual Academy Chemistry
Earth and Space Science	Conceptual Academy Earth and Space Science
Physical Science	Conceptual Academy Physics and Chemistry Integrated
Physics	Conceptual Academy Physics

The scope and sequence summarizes how the high school program textbook chapters and activities are organized in relation to the MCCRS for Science. The chapter sequencing is designed to build on prior ideas and integrate the three dimensions of the *Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*.

Course Sequence

The Conceptual Academy High School scope and sequence can ideally progress through the Mississippi Best Practices for CCR Sequencing in Science.

Grade	9	10	11	12
Course	Biology (260131)	Chemistry 1 (400519)	Physics (400820) or Earth and Space (260629)	Physics (400820) or Earth and Space (260629)

Additionally, the Foundations of Biology program is available for students to gain the basic knowledge needed prior to attempting the rigorous Biology course required for graduation. Combined with the Biology program at 10th grade





and the Physical Science program at 11th grade, this sequence would give students the breadth of knowledge across the three core science disciplines in a three-year sequence. If students opted for a fourth year of science they could go into more depth with the Chemistry of Physics programs or gain further breadth with Earth and Space Science.

Grade	9	10	11	12
Course	Foundations of Biology (260628)	Biology (260131)	Physical Science (400700)	Chemistry 1 (400519) <u>or</u> Physics (400820) <u>or</u> Earth and Space (260629)

The order of the standards within each program reflects a purposeful consideration of how to build disciplinary core ideas (DCIs), science and engineering practices (SEPs), and crosscutting concepts (CCCs) through three-dimensional learning, while also maintaining a logical progression through the core content knowledge and covering 100% of the MCCRS for Science.





Grade: High school

Subject: Foundations of Biology

Program Title: Conceptual Academy Biology

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Chapter 13 Control and Development																																	
Chapter 14 Maintaining the Body																																	
Chapter 15 Protecting Health																																	
Chapter 16 Populations																																	
Chapter 17 Communities																																	
Chapter 18 Ecosystems																																	





Grade: High school Subject: Biology

Program Title: Conceptual Academy Biology

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Grade: High school Subject: Chemistry

Program Title: Conceptual Academy Chemistry

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Chapter 13: Nutrients of Life																																																		
Chapter 14: Medicinal Chemistry																																	Т																	
Chapter 15: Optimizing Food Production																																																		
Chapter 16: Water and Air Resources																																																		
Chapter 17: Capturing Energy																																																		





Grade: High school

Subject: Earth and Space Science

Program Title: Conceptual Academy Earth and Space Science

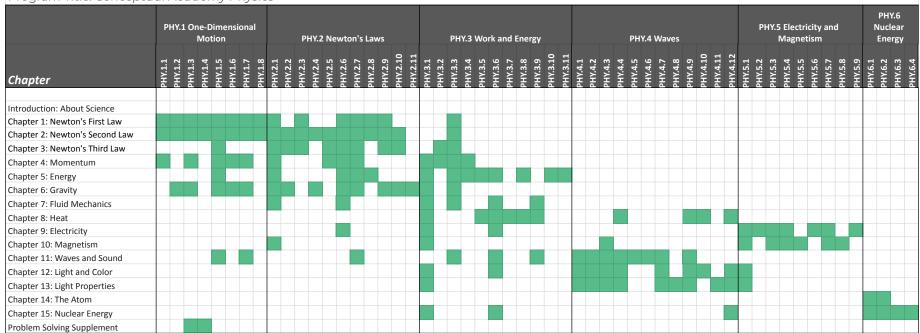
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Chapter 12: Wind and Water on the Move																														
Chapter 13: Environmental Geology																														
Chapter 14: Climate Dynamics																														
Chapter 15: The Solar System																														
Chapter 16: The Inner Solar System																														
Chapter 17: The Outer Solar System																														
Chapter 18: Newton's Laws of Motion																														
Chapter 19: Gravity																														
Chapter 20: Atoms and Light																														
Chapter 21: Nuclear Energy																														
Chapter 22: Stars																														
Chapter 23: Superstars																														
Chapter 24: Galaxies																														
Chapter 25: Relativity																														
Chapter 26: Cosmology																														





Grade: High school Subject: Physics

Program Title: Conceptual Academy Physics







Grade: High school

Subject: Physical Science

Program Title: Conceptual Academy Physics and Chemistry Integrated

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