Content Area or Department	Red Clay Consolidated School District - Science
Overview:	In the Red Clay Consolidated School District, students engage in diverse, inquiry-based explorations and investigations of the natural world through science instruction from kindergarten through graduation. As a member of the Delaware Science Coalition, students receive instruction in physical science, life science, earth/space science, and engineering through the Next Generation Science Standards (NGSS). The NGSS, adopted by Delaware in September 2013, incorporate a three-dimensional approach to challenge all students at every grade level to create a deep understanding of the world, the universe, and living things. Through the NGSS, Red Clay science educators prepare students for a post-graduation experience in which they can participate fully in a global workforce.
Desired Outcomes:	Students will make sense of scientific phenomena at each grade level by engaging in the following Science and Engineering Practices: 1. Asking questions and defining problems 2. Developing and using models 3. Planning and carrying out investigations 4. Analyzing and interpreting data 5. Using mathematics and computational thinking 6. Constructing explanations and designing solutions 7. Engaging in argument from evidence 8. Obtaining, evaluating, and communicating information. Students will integrate these Practices with Disciplinary Core Ideas (summarized in "Topics to be Covered") and the following Cross-Cutting Concepts to achieve three-dimensional understanding: 1. Patterns 2. Cause-effect: Mechanism and explanation 3. Scale, proportion, and quantity 4. Systems and system models 5. Energy and matter: Flows, cycles, and conservation 6. Structure and Function 7. Stability and Change
Topics to be Covered:	

Kindergarten	● Forces and interactions--pushes and pulls ● Plants, animals, and their environments ● Weather and Climate ● Engineering Design (all year)
First Grade	● Waves--sound and light ● Structure, function, information processing in plants and animals ● Sun and moon systems: patterns and cycles ● Engineering Design (all year)
Second Grade	● Structure and properties of matter ● Interdependent relationships in ecosystems ● Processes that shape the Earth ● Engineering Design (all year)
Third Grade	● Forces and interactions ● Inheritance and variance of traits ● Environmental impacts on organisms ● Weather and climate ● Engineering Design (all year)
Fourth Grade	● Energy and waves ● Information processing in organisms ● Processes that shape the Earth (quantitative) ● Engineering Design (all year)
Fifth Grade	● Matter interactions and conservation ● Astronomy ● Matter and energy in ecosystems ● Engineering Design (all year)
Sixth Grade	● Forces and Energy ● Space ● Planet Earth ● Engineering Design (all year)
Seventh Grade	● Matter ● Cells and Genetics ● Adaptations ● Engineering Design (all year)
Eighth Grade	● Transformation of Energy and Waves ● Weather and Climate ● Ecosystems ● Engineering Design (all year)
High School Physical	● Structure and properties of matter

Sciences	• Chemical reactions--creating new substances • Forces, energy transfer, and waves • Engineering Design (all year)
High School Life Sciences	• Ecology • Cell Biology • Genetics • Evolution • Engineering Design (all year)
High School Earth Sciences	• Earth Systems • Planetary Science • Weather and Climate • Engineering Design (all year)
Link to Standards:	These standards can be found by clicking the following link: http://www.nextgenscience.org/
Additional Resources:	Delaware Department of Education Science page: https://www.doe.k12.de.us/Page/1936