

**West Carroll Special School District
Instructional Plan/Pacing Guide, 2016-2017**

Teacher: Martha Vann		Co-Teacher: N/A			
Subject: Science		Grade Level: 4			
Unit Title	TN Standard # ACT Standard # (When Applicable)	Major Topics and Concepts Addressed	Major Activities Assignments Field Trips	Assessing Student Mastery	Pacing (Beginning and ending dates of instruction)
				What student generated product will demonstrate that he/she has met the learning expectation?	
Embedded Inquiry, Technology and Engineering	0407.Inq.1	<p>Introduction to Scientific Inquiry: explore different scientific phenomena by:</p> <ul style="list-style-type: none"> • asking questions, • making logical predictions, • planning investigations • Recording data. 	<p>Prepare and analyze plans for scientific investigation and put them into action.</p> <p>Create hypothesis related to specific investigations</p> <p>Select and justify the selection of investigations to answer specific questions</p>	<p>: Develop the insight to make logical predictions about observable phenomena.</p> <p>prepare and analyze plans for scientific investigation</p> <p>select investigations that can be used to answer a specific question</p>	<p>8/ 8/2016</p> <p>Continues throughout school year with a concentration on implementation during the first two weeks</p>
Embedded Inquiry, Technology and Engineering	0407.Inq.2 0407.Inq.3	<p>– Introduction to the Tools of inquiry</p> <ul style="list-style-type: none"> • Identify tools needed to • Investigate specific questions. • Microscope, tape measure, meter stick, graduated cylinder, balance scales, • Maintain a science notebook • That includes observations, data, diagrams, and explanations. 	<p>: work with various pieces of equipment, using them to conduct investigations, and collect data</p> <p>Maintain a science journal</p>	Distinguish and correctly use tools appropriate for a specific inquiry.	<p>8/11/2016(start date)</p> <p>Continues throughout school year with a 1 week concentration during the 1st 9- weeks</p>

Embedded Inquiry, Technology and Engineering	0407.Inq.3. 0407.Inq.4 0407.Inq.5 0407.Inq.6	<ul style="list-style-type: none"> - Introduction to Collection and Interpretation of Data: • Collect and organize data into appropriate tables, graphs, drawings and diagrams. • Identify and interpret simple data and patterns of evidence to communicate the findings of multiple investigations to reach a conclusion 	Collect and analyze data from investigations and prepare functionally appropriate materials to communicate these findings.	Distinguish and appropriately use various charts and types of graphs: Circle graph, line graph, bar graph, etc	8/15/2016 Continues throughout school year with a concentration during first week
Embedded technology and Engineering	0407.T/E.1 0407.T/E.2 0407.T/E.3 0407.T/E.4 0407.T/E.5	<ul style="list-style-type: none"> • Looking at the way different technologies and inventions impact people and other organisms • Recognize unintended consequences caused by human activity • Identify appropriate materials, machines and tools that can extend or enhance the ability to solve a specified problem. 	Explain how different tools, technologies and inventions answer questions and solve problems. Identify appropriate materials and tools that can extend or enhance the ability to solve an existing problem. Recognize the connection between scientific advances, new knowledge, and the availability of materials, new tools and new technologies.	Explain how different inventions and technologies impact humans and other living organisms Apply creative design strategy to solve a particular problem Design a tool or process to address an identified problem caused by human activity Determine criteria to evaluate the effectiveness if a solution to a specified problem	8/15/2-15 and continues throughout the school year
Physical Science: Matter	0407.9.1 0407.9.2 0407.9.3	<ul style="list-style-type: none"> • Measure and compare the physical properties various types of matter. • Compare use of appropriate tools to the causes and effects of various physical and chemical changes in matter. 	Collect data to illustrate that the physical properties of various liquids and solids can be described with tools that measure mass, weight, length and volume Keep a scientific journal	Choose appropriate tools for measuring a specific physical property of matter. Determine the mass volume and temperature of a substance or object using proper units if measurement.	8/29/16-9/23/16

				Interpret causes and effects of physical and chemical changes in matter.	
Physical Science; Forms of Energy	0407.10.1 0407.10.2 4047.10.3	<ul style="list-style-type: none"> • Forms of Energy: heat, radiant, chemical • How light travels and is influenced by various types of materials and surfaces • Transparent, Translucent Opaque 	<p>Identify different forms of energy, heat, radiant, chemical</p> <p>Determine which surfaces reflect, refract or absorb energy</p> <p>Determine whether a material is transparent, translucent or opaque</p>	<p>Design an investigation to demonstrate the way different forms of energy release heat or light</p> <p>Design an experiment to investigate the way different surfaces reflect, refract or absorb light</p> <p>Gather and categorize various materials as transparent, translucent, or opaque</p>	9/29/16-10/21/16
Physical Science: Motion	0407.11.1 0407.11.2 0407.11.3 0407.11.4 0407.11.5	<ul style="list-style-type: none"> • Position of objects relative to a fixed point • Factors that affect speed and distance traveled • Friction • Speed and distance over time 	<p>Describe the position of an object relative to fixed points: East, West, North, South, Above, Below, Beside</p> <p>Identify factors that influence motion, speed and distance</p>	<p>Identify the position of objects relative to fixed reference points</p> <p>Design an investigation to identify factors that affect speed and distance of an object in motion</p> <p>Design an investigation to demonstrate the effects of friction on movement of an object</p> <p>Complete the appropriate graphs</p>	10/24/16-11/4/16

Earth and Space Science	<ul style="list-style-type: none"> • 0407.7.1 • 0407.7.2 • 0407.7.3 • 0407.7.4 	<ul style="list-style-type: none"> • Weathering • Erosion • Deposition • Use of earth materials • Renewable and Non-renewable resources 	<p>Use materials to demonstrate weathering, erosion and deposition</p> <p>Design activities using various earth materials in appropriate fashion</p> <p>Explore renewable and non-renewable resources</p> <p>Explore the use of earth materials to solve human problems</p>	<p>Prepare a demonstration to illustrate how wind and water affect the Earth's surface</p> <p>Design an investigation to demonstrate how erosion and deposition change Earth's surface</p> <p>List factors that determine the appropriate use of Earth materials</p> <p>Use data from a variety of informational texts to analyze man's impact on non-renewable resources.</p>	11/7/16-11/22/16
Earth and Space Science: Water Cycle	<ul style="list-style-type: none"> • 0407.8.1 • 0407.8.2 • 0407.8.3 	<ul style="list-style-type: none"> • Components of the water cycle: <ul style="list-style-type: none"> • Evaporation, • precipitation, • condensation • Weather • Climate 	<p>Identify the basic features of the water cycle and describe their importance to life on Earth</p> <p>Distinguish between weather and climate</p>	<p>Prepare a model that illustrates the basic features of the water cycle</p> <p>Distinguish between weather and climate</p> <p>Design and illustration to show how weather and climate affect the water cycle</p>	11/28/16-12/9/16
Forces in Nature Magnets	<ul style="list-style-type: none"> • 0407.12.1 • 0407.12.2 	<ul style="list-style-type: none"> • Interactions between Magnets • Interaction between Magnets and Electricity 	<p>Identify how magnets attract and repel each other</p> <p>Explore the relationship between magnets and electricity-electromagnets</p>	<p>Correctly identify which magnets will attract or repel each other</p> <p>Determine how electrically charged material interacts with other objects</p>	12/9/16-12/16/16
Forces in Nature Circuits	<ul style="list-style-type: none"> • 0407.12.3 	<ul style="list-style-type: none"> • Simple Circuits • Open Circuits • Closed circuits 	<p>Determine the path of an electrical current in a simple circuit</p>	<p>Create a simple circuit that includes a bulb,</p>	1/3/17-1/10/17

				wire, switch and battery Determine if a circuit is open or closed Determine the path of an electric current	
The Universe	<ul style="list-style-type: none"> 0407.6.1 0407.6.2 	<ul style="list-style-type: none"> Moon Phases Solar and Lunar Eclipses Cause of Moon Phases 	<p>Organize the phases of the moon in the correct sequence</p> <p>Understand that the phases of the moon are caused by the revolution of the moon and earth around the sun</p> <p>Infer the reason for lunar and solar eclipses</p>	<p>Order the phases of the moon</p> <p>Create a drawing that shows the relative positions of the sun, moon and earth during a lunar and solar eclipses</p>	1/11/17-1/27/16
Life Science: Cells	0407.1.1 0407.1.2	<ul style="list-style-type: none"> Basic features of plant and animal cells Plant and animal cell structures and their functions 	<p>Create models of plant and animal cells</p> <p>Recognize that cells are the basic building blocks of all living things</p> <p>Compare and contrast the structures and functions of plant and animal cells</p>	Use illustrations to compare and contrast the basic structures of plant and animal cells	1/30/17-2/10/17
Life Science: Flow of Matter and Energy	0407.3.1 0407.3.2 0407.3.3	<ul style="list-style-type: none"> Food webs Energy Pyramid Carnivores, Omnivores, Herbivores 	<p>Determine how organisms function within an environment in terms of their location on an energy pyramid</p> <p>Determine how organisms function in an environment in terms of their position on a food web</p> <p>Determine how organisms meet their energy needs in their environment</p>	<p>Create a food web that illustrates the energy relationships between plants and animals</p> <p>Classify organisms as carnivores, omnivores, or herbivores</p>	2/13/17-2/24/17

Life Science: Interdependence	0407.2.1 0407.2.2	<ul style="list-style-type: none"> • Predation and competition • Interdependence 	<p>Describe the roles of predator and prey in an ecosystem</p> <p>Recognize the impact of competition or predation on an ecosystem</p>	<p>Analyze the effect an increase in predation or competition affects an ecosystem</p> <p>Design a simple investigation to illustrate the effects of predation, competition and interdependency among organisms</p>	2/27/17- 3/3/17
Life Science: Heredity	0407.4.1 0407.4.2	<ul style="list-style-type: none"> • Relationships between reproduction and continuation of a species • Complete and incomplete metamorphosis 	<p>Design a simple demonstration that illustrates the relationship between reproduction and species survival</p> <p>Study the life cycles of a variety of organisms to determine if these processes illustrate complete or incomplete metamorphosis</p>	<p>Illustrate the relationship between reproduction and survival of a species</p> <p>Distinguish between incomplete and complete metamorphosis</p> <p>Analyze life cycles of various organisms to determine if they undergo complete or incomplete metamorphosis</p>	3/6/17- 3/22/17
Life Science: Biodiversity and Change	0407.5.1 0407.5.2 0407.5.3	<ul style="list-style-type: none"> • Physical Adaptations • Behavioral Adaptations • Plant Tropisms 	<p>Determine how a physical or behavioral adaptation enhances the chances of survival of an organism</p> <p>Infer reasons for extinction</p> <p>Describe how environmental changes affect plants</p>	<p>Classify animals according to their physical adaptations for obtaining food, water, air, etc.</p> <p>Classify animals according to their methods of defense and survival within their environment</p> <p>Describe plant response to outside stimuli</p>	3/24/17- 4/12/17
Review and testing	All Objectives	All standards previously taught	Play games, create foldables, complete group and individual activities	Play games, create foldables, complete group and individual activities	4/13/17- 4/28/17
Life Science	Extinction				5/1/17- 5/19/17