

Fifth Grade Science Curriculum Map

Quarter 1							
NGSSS Body of Knowledge	<i>Nature of Science</i>	<i>Nature of Science</i>	<i>Nature of Science</i>	<i>Nature of Science/Earth and Space Science</i>	<i>Nature of Science/Earth and Space Science</i>	<i>Nature of Science/Earth and Space Science</i>	<i>Nature of Science/Earth and Space Science</i>
Unit of Study	Introduction to Practice of Science	Introduction to Practice of Science	Introduction to Practice of Science	Space	Space	Weather and Climate	Weather and Climate
Target Standards	<p>SC.5.N.2.1 : Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.</p> <p>SC.5.N.1.6 : Recognize and explain the difference between personal opinion/interpretation and verified observation.</p>	<p>SC.5.N.1.1 : Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identifications of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.</p> <p>SC.5.N.2.2 : Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others.</p> <p>SC.5.N.1.3 : Recognize and explain the need for repeated experiment trials.</p>	<p>SC.5.N.1.4 : Identify a control group and explain its importance in an experiment.</p> <p>SC.5.N.1.2 : Explain the difference between an experiment and other types of scientific investigations.</p> <p>SC.5.N.1.5 : Recognize and explain that authentic scientific investigation frequently does not parallel the steps of “the scientific method”.</p>	<p>SC.5.E.5.3 : Distinguish among the following objects of the Solar System-sun, planets, moons, asteroids, comets-and identify Earth’s position in it.</p> <p>SC.5.E.5.2 : Recognize the major common characteristics of all planets and compare/contrast the properties of inner and outer planets.</p>	<p>SC.5.E.5.1 : Recognize that a galaxy consists of gas, dust, and many stars, including any objects orbiting the stars. Identify our home galaxy as the Milky Way.</p>	<p>SC.5.E.7.1 : Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and form from one state to another.</p> <p>SC.5.E.7.2 : Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth’s water reservoirs via evaporation and precipitation processes.</p>	<p>SC.5.E.7.3 : Recognize how air temperature, barometric pressure, humidity, wind speed and direction, and precipitation determine the weather in a particular place and time.</p>
Pacing	Week 1	Weeks 2-4	Weeks 2-4	Week 5	Week 6	Weeks 7-8	Week 9 <small>(weather continues in week 10)</small>
Objective/ Learning Goal/SWBT	<p>*Explain that science is grounded on evidence-based observations that are testable.</p> <p>*Review the difference between verified observations (evidence) and inferences (explanations linked to evidence).</p> <p>*Explain the difference between verified observation (fact) and personal opinion/ interpretation (bias).</p> <p>*Distinguish between examples of empirical evidence and personal opinion/interpretation.</p>	<p>*Generate testable questions that will generate observable and measurable data.</p> <p>*Formulate a testable hypothesis based on information gathered.</p> <p>*Design a scientific investigation.</p> <p>*Use scientific tools.</p> <p>*Explain that all conditions in an experiment outside the manipulated variable must be controlled or kept the same.</p> <p>*Collect and record observable and measurable data.</p> <p>*Organize, interpret, and analyze data.</p> <p>*Discuss the reason for differences that may occur in data across groups as a result of using different tools and/or procedures.</p>	<p>*Identify the control group in an experiment.</p> <p>*Explain the importance of a control group (to yield baseline data by which all other data will be compared).</p> <p>*Explain that an authentic scientific investigation frequently does not parallel the steps of “the scientific method”.</p> <p>*Explain the difference between an experimental investigation and other types of scientific investigation.</p>	<p>*Review the Earth’s rotation and revolutions.</p> <p>*Review how the appearance of the moon changes each night.</p> <p>*Review how patterns of stars (constellations) appear to shift across the sky nightly.</p> <p>*Distinguish among the following objects in the Solar System: sun, planets, moons, asteroids, and comets.</p> <p>*Identify the position and sequential order of objects within the Solar System in relation to the sun using models.</p> <p>*Identify major common characteristics of all planets.</p> <p>*Compare the similarities among and differences between the characteristics of inner and outer planets.</p>	<p>*Review that the sun is a star that emits energy in the form of light and heat.</p> <p>*Review that stars are made of gases.</p> <p>*Review how stars can be different: brightness, size, temperature/color.</p> <p>*Review how a star’s appearance (brightness and size) is affected by its distance from Earth.</p> <p>*Describe the composition of a galaxy (gas, dust, and many stars, including any objects orbiting the stars).</p> <p>*Identify our home galaxy as the Milky Way.</p>	<p>*Review that water and the sun’s energy are renewable resources found on Earth.</p> <p>*Review how water changes its state through warming and cooling processes.</p> <p>*Create and label the parts of various 2- and 3-D models of the water cycle.</p> <p>*Investigate the water cycle using various 3-D models.</p> <p>*Explain the changes that occur to water as it moves from one part of the water cycle to another.</p> <p>*Describe the role of the sun and oceans in the water cycle.</p> <p>*Explain that oceans are connected to all bodies of water on Earth via the evaporation and precipitation processes.</p>	<p>*Review measuring temperature using dual thermometers.</p> <p>*Describe each of the components that determine the weather in a particular place and time.</p> <p>*Match weather data collection tools to the component of weather it measures.</p> <p>*Describe relationships that exist between components of weather.</p> <p>*Identify and describe how air temperature, air pressure, humidity, wind speed and direction, and precipitation determine the weather in a particular place.</p> <p>*Identify and describe how air temperature, air pressure, humidity, wind speed and direction, and precipitation varies at different times.</p>
Inquiry Flipcharts/Labs	<p>*How Do Scientists... p.3</p> <p>*Think Like...p.4</p> <p>*How Does the Body...p.34</p> <p>*Test the Waters...p.42</p>	<p>*How Do You Perform...p.5</p> <p>*How Can Scientists...p.7</p>	<p>*How Do You Perform...p.5</p> <p>*How Can Scientists...p.7</p>	<p>*Making a Scale Model p.8</p> <p>*How Do We Observe...p.9</p>		<p>*Watching the Water...p.11</p> <p>*What Happens...p.12</p>	<p>*I Can Read the...p.13</p> <p>*How Can We Observe...p.15</p> <p>*Find the Freezing...p.17</p>
Fusion Textbook	TE p.1A-20A	TE p.21A-56	TE p.21A-56	TE p. 61A-82A	TE p. 83-94	TE p.97A-114A	p.115A-142A (week 10 also)

Fifth Grade Science Curriculum Map

Quarter 2

NGSSS Body of Knowledge	Nature of Science/Earth and Space Science	Nature of Science/Earth and Space Science	Nature of Science/Earth and Space Science	Nature of Science/Physical Science	Nature of Science/Physical Science	Nature of Science/Physical Science	Nature of Science/Physical Science
Unit of Study	Weather and Climate	Weather and Climate	Weather and Climate	Matter	Matter	Matter	Energy and Motion
Target Standards	<p>SC.5.E.7.4 : Distinguish among the various forms of precipitation (rain, snow, sleet, and hail), making connections to the weather in a particular place and time.</p> <p>SC.5.E.7.5 : Recognize that some of the weather-related differences, such as temperature and humidity, are found among different environments, such as swamps, deserts, and mountains.</p>	<p>SC.5.E.7.6 : Describe characteristics (temperature and precipitation) of different climate zones as they relate to latitude, elevation, and proximity to bodies of water.</p>	<p>SC.5.E.7.7 : Design a family preparedness plan for natural disasters and identify the reasons for having such a plan.</p>	<p>SC.5.P.8.1 : Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature.</p>	<p>SC.5.P.9.1 : Investigate and describe that many physical and chemical changes are affected by temperature.</p>	<p>SC.5.P.8.3 : Demonstrate and explain that mixtures of solids can be separated based on observable properties of their parts such as particle size, shape, color, and magnetic attraction.</p> <p>SC.5.P.8.2 : Investigate and identify materials that will dissolve in water and those that will not and identify the conditions that will speed up or slow down the dissolving process.</p>	<p>SC.5.P.10.1 : Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.</p> <p>SC.5.P.10.2 : Investigate and explain that energy has the ability to cause motion or create change.</p>
Pacing	Week 10	Weeks 11-12	Week 12 (enrichment)	Weeks 13-14	Weeks 15-16	Week 17	Week 18 (and 19)
Objective/Learning Goal/SWBT	<p>*Identify cloud types and their relationship to weather.</p> <p>*Explain how different types of precipitation form.</p> <p>*Explain the conditions necessary for different types of precipitation to form.</p> <p>*Discuss relationships that exist amongst weather, location, and season.</p> <p>*Compare the weather conditions of different environments: desert, grassland, rainforest, tundra, wetland, swamps, and mountains.</p>	<p>*Identify the location of major climate zones on a globe and on different maps.</p> <p>*Locate the equator and Florida on a globe and on different maps.</p> <p>*Distinguish between environments and climate zones.</p> <p>*Describe air temperature and precipitation of different climate zones.</p> <p>*Describe how air temperature and precipitation relate to latitude within a climate zone.</p> <p>*Describe how air temperature and precipitation relate to elevation within a climate zone.</p> <p>*Describe how air temperature and precipitation relate to the proximity to bodies of water within a climate zone.</p>	<p>*Recognize that Florida's temperate climate, proximity to the ocean, and geography make it vulnerable to a number of potential natural disaster threats.</p> <p>*Design a family preparedness plan for natural disasters.</p> <p>*Identify the reasons for having family preparedness plans.</p>	<p>*Review by describing and classifying a material as a solid, liquid, or gas.</p> <p>*Review how to use the water displacement method to find the volume of regular- and irregular-shaped solids.</p> <p>*Justify the reasoning for the classification of materials based on shape, mass and volume.</p> <p>*Recognize that physical properties include both observable and measurable properties.</p> <p>*Compare and contrast the observable properties of solids, liquids, and gases.</p> <p>*Compare and contrast the measurable properties of solids, liquids, and gases.</p>	<p>*Review the causes for the weathering of rocks.</p> <p>*Review the causes for the erosion of rocks.</p> <p>*Review by describing visible signs of a chemical change that may occur.</p> <p>*Review by comparing the similarities and differences of physical and chemical changes.</p> <p>*Investigate and describe that many physical changes to solids and liquids are affected by temperature change.</p> <p>*Investigate and describe how temperature can cause a chemical change that results in the formation of a new material with different characteristics.</p>	<p>*Demonstrate and explain how mixtures of solids can be separated based on observable properties of their parts through sorting, screening-sieve, filtration, magnets, and evaporation.</p> <p>*Investigate common household materials that will dissolve in water and those that will not.</p> <p>*Recognize that not all parts of a mixture will dissolve. *Investigate the condition that will speed up or slow down the dissolving process and/or chemical reactions.</p>	<p>*Identify and describe examples where energy has caused motion and/or created change.</p> <p>*Explain the relationship between energy, motion, and change.</p>
Inquiry Flipcharts/Labs	I Can Read the Sky! and When the Wind Blows, p. 13 How Can We Observe Weather Patterns?, p. 15			Making Measurements and Get Detailed, p. 6	Observe Some Chemical Changes and Shhhh! Secret Messages, p. 18 How Can	An Inky Mixture and Does It Dissolve, p. 20 What Affects the Speed of Dissolving?, p. 21	Seeing Sound Energy and Light Travels. p. 23 What Changes Can Energy Cause?, p. 24

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	Find the Freezing Point, p. 17				Temperature Change Matter?, p. 19		
Fusion Textbook	p.115A-142A	P.143-158		p.163A-178	p.179A-194	p.195A-210A	p.227A-246A (continued in week 19)

Quarter 3						
NGSSS Body of Knowledge	<i>Nature of Science/Physical Science</i>	<i>Nature of Science/Physical Science</i>	<i>Nature of Science/Physical Science</i>	<i>Nature of Science/Physical Science</i>	<i>Nature of Science/Physical Science</i>	<i>Nature of Science/Life Science</i>
Unit of Study	Energy and Motion	Energy and Motion	Energy and Motion	Energy and Motion	Energy and Motion	Life
Target Standards	<p>SC.5.P.10.1 : Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.</p> <p>SC.5.P.10.2 : Investigate and explain that energy has the ability to cause motion or create change.</p>	<p>SC.5.P.10.4 : Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion.</p> <p>SC.5.P.10.3 : Investigate and explain that an electrically-charged object can attract an uncharged object and can either attract or repel another charged object without any contact between the objects.</p>	<p>SC.5.P.11.1 : Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).</p> <p>SC.5.P.11.2 : Identify and classify materials that conduct electricity and materials that do not.</p>	<p>SC.5.P.13.1 : Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.</p>	<p>SC.5.P.13.2 : Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.</p> <p>SC.5.P.13.4 : Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced.</p> <p>SC.5.P.13.3 : Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.</p>	<p>SC.5.L.14.1 : Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs.</p>
Pacing	Week 19 (continued from week 18)	Weeks 20-21	Weeks 20-21	Weeks 22-24	Weeks 22-25	Weeks 25-27
Objective/ Learning Goal/SWBT	<p>*Identify and describe examples where energy has caused motion and/or created change.</p> <p>*Explain the relationship between energy, motion, and change.</p>	<p>*Investigate and explain that electrical energy can be transformed into heat, light, sound, and mechanical energy (e.g., lamp, heater, generator, motor, stove, mobile device).</p> <p>*Investigate static electricity (a buildup of electrical charges on an object).</p> <p>*Explain that opposite electrical charges attract (pull towards each other) and like electrical charges repel (push apart) without any contact needed between the objects.</p> <p>*Explain that an electrically-charged object, whether positively or negatively charged, will attract an uncharged (neutral) object.</p>	<p>*Determine the source of energy for a circuit.</p> <p>*Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop) when constructing a simple circuit.</p> <p>*Distinguish between open and closed circuits.</p> <p>*Determine which circuit from a visual representation can carry electricity to power an object and which circuit cannot.</p> <p>*Identify and classify materials that are good conductors (e.g., copper, water, aluminum foil) and insulators/poor conductors (e.g., plastic, rubber, glass, wood) of electricity.</p>	<p>*Review that gravity is a force that can be overcome.</p> <p>*Review examples of magnetic attraction and repulsion.</p> <p>*Identify familiar forces (pushes, pulls, friction, gravity, magnetism) that cause or hinder movement of objects.</p> <p>*Identify two or more forces acting upon an object in a scenario.</p> <p>*Interpret the effect of two or more forces acting upon an object.</p> <p>*Recognize that friction is a force that resists movement</p>	<p>*Measure force in Newtons (N) using a spring scale.</p> <p>*Demonstrate that a force may change an object's original position.</p> <p>*Investigate that the greater the force applied to an object, the greater the change in motion of a given object.</p> <p>*Investigate and explain the effect balanced and unbalanced forces have on motion. *Investigate and describe the relationship among mass, force, and motion.</p>	<p>*Identify the organs in the human body: brain, heart, lungs, stomach, liver, small intestine, large intestine, pancreas, muscles, skeleton, kidneys, bladder, and reproductive organs (ovaries, testes), sensory organs (eyes, ears, nose, tongue, and skin).</p> <p>*Describe the function(s) of the body parts mentioned above.</p>
Inquiry Flipcharts/Labs	Seeing Sound Energy and Light Travels. p. 23 What Changes Can Energy Cause?, p. 24	Static Cereal! and A Big Charge!, p. 25 How Do Electric Charges Interact?, p. 26 What Is an Electric	Static Cereal! and A Big Charge!, p. 25 How Do Electric Charges Interact?, p. 26 What	On A Roll and Make It Easier, p. 30 How Do Forces Affect Motion?, p. 31 What Are	On A Roll and Make It Easier, p. 30 How Do Forces Affect Motion?, p. 31 What Are	Muscle Burnout and Circulate!, p. 35 The Power of Chewing and Planimal, p. 36

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		Circuit?, p. 28 Compare Two Circuits, p. 29	Is an Electric Circuit?, p. 28 Compare Two Circuits, p. 29	Balanced and Unbalanced Forces?, p. 32	Balanced and Unbalanced Forces?, p. 32	
Fusion Textbook	p.227A-246A	p. 247A-276; 281A-300	p. 247A-276; 281A-300	p.303A-328	p.303A-328	p.333A-386

Quarter 4

NGSSS Body of Knowledge	Nature of Science/Life Science	Nature of Science/Life Science	All	Nature of Science	Nature of Science	Nature of Science	Nature of Science	Nature of Science
Unit of Study	Life	Life	All	Practice of Science	Practice of Science	Practice of Science	Practice of Science	Practice of Science
Target Standards	SC.5.L.14.2 : Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support – some with internal skeletons other with exoskeletons – while some plants have stems for support.	SC.5.L.17.1 : Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics. SC.5.L.15.1 : Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.	All comprehensive standards	SC.5.N.2.1 : Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence. SC.5.N.1.6 : Recognize and explain the difference between personal opinion/interpretation and verified observation.	SC.5.N.1.1 : Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identifications of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.	SC.5.N.1.4 : Identify a control group and explain its importance in an experiment	SC.5.N.1.2 : Explain the difference between an experiment and other types of scientific investigation. SC.5.N.1.5 : Recognize and explain that authentic scientific investigation frequently does not parallel the steps of “the scientific method”.	SC.5.N.2.2 : Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others. SC.5.N.1.3 : Recognize and explain the need for repeated experimental trials.
Pacing	Week 28	Week 29		After testing-Week 36	After testing-Week 36	After testing-Week 36	After testing-Week 36	After testing-Week 36
Objective/ Learning Goal/ SWBT	*Review plant structures and their functions. *Review animal classification and attributes for each group. *Differentiate the function(s) of organs in animals (e.g., exoskeleton vs. internal skeleton, lungs vs. gills, nose vs. antenna, skin vs. scales). *Compare structure/function of plants and animals that serve similar roles limited to the following: skin to plant covering, skeleton to stem, reproductive organs to a flower (pistil, ovary, eggs, pollen/sperm, stamen).	*Review food chains. *Review the classification of consumers as herbivores, carnivores, or omnivores. *Distinguish between physical and behavioral adaptations displayed by animals and plants. *Explain how adaptations displayed by plants and animals enable them to survive in different environments. *Identify ways an environment changes. *Describe structures and behaviors that plants and animals use in a changing environment. *Explain that physical and behavioral adaptations of plants and animals are used in changing environments to enable some plants and animals to survive and reproduce while others die or move to new locations.	FCAT Review and Administration	*Explain that science is grounded on evidence-based observations that are testable. *Review the difference between verified observations (evidence) and inferences (explanations linked to evidence). *Explain the difference between verified observation (fact) and personal opinion/ interpretation (bias). *Distinguish between examples of empirical evidence (observations) and personal opinion/interpretation (a viewpoint based on one’s own judgment of the facts; a bias).	*Generate testable questions that will generate observable and measurable data. *Formulate a testable hypothesis based on information gathered from research. *Design a scientific investigation individually or in teams through a variety of methods. *Use scientific tools during investigations to observe and measure physical properties. *Explain that all conditions in an experiment outside the manipulated variable must be controlled or kept the same. *Evaluate another’s written procedure or experimental setup. *Collect and record observable and measurable data in science notebooks. *Organize data in appropriate forms of record keeping. *Interpret and analyze data that has been collected. *Generate appropriate explanations based on evidence gathered. *Apply explanations to real world connections (application).	*Identify the control group in an experiment. *Explain the importance of a control group (to yield baseline data by which all other data will be compared).	*Explain that an authentic scientific investigation frequently does not parallel the steps of “the scientific method”. *Explain the difference between an experimental investigation and other types of scientific investigation.	*Recognize that the results of experimental trials can vary even when common tools and procedures are used. *Discuss the reason for differences that may occur in data across groups as a result of using different tools and/or procedures. *Explain the need for repeated experimental trials or large experimental groups (to ensure the results are accurate, reliable, and valid). *Explain what is needed in order to repeat and replicate a scientific investigation (documented scientific procedures). *Recognize that when an experiment is replicated, it should produce similar results. *Distinguish the difference between repetition and replication.
Inquiry Flipcharts/ Labs	Hunting for Beans and Compost in a Bag, p. 37 How Does Drought Affect Plant Growth?, p. 38 Gobbling Up Your Greens and Animal Adaptations, p. 39 Why Do Bird Beaks Differ?, p. 40 Cold as Ice and Putting a Foot Down, p. 41	Hunting for Beans and Compost in a Bag, p. 37 How Does Drought Affect Plant Growth?, p. 38 Gobbling Up Your Greens and Animal Adaptations, p. 39 Why Do Bird Beaks Differ?, p. 40 Cold as Ice and Putting a Foot Down, p. 41		How Do Scientists Learn About the Natural World?, p. 3 Think Like a Scientist and Compare Models, p. 4 How Does the Body Stay Cool?, p. 34 Test the Waters and That’s Fishy, p. 42 How Do You Perform a Controlled Experiment?, p. 5 How Can Scientists Learn from Observations?, p. 7	How Do Scientists Learn About the Natural World?, p. 3 Think Like a Scientist and Compare Models, p. 4 How Does the Body Stay Cool?, p. 34 Test the Waters and That’s Fishy, p. 42 How Do You Perform a Controlled Experiment?, p. 5 How Can Scientists Learn from Observations?, p. 7	How Do Scientists Learn About the Natural World?, p. 3 Think Like a Scientist and Compare Models, p. 4 How Does the Body Stay Cool?, p. 34 Test the Waters and That’s Fishy, p. 42 How Do You Perform a Controlled Experiment?, p. 5 How Can Scientists Learn from Observations?, p. 7	How Do Scientists Learn About the Natural World?, p. 3 Think Like a Scientist and Compare Models, p. 4 How Does the Body Stay Cool?, p. 34 Test the Waters and That’s Fishy, p. 42 How Do You Perform a Controlled Experiment?, p. 5 How Can Scientists Learn from Observations?, p. 7	How Do Scientists Learn About the Natural World?, p. 3 Think Like a Scientist and Compare Models, p. 4 How Does the Body Stay Cool?, p. 34 Test the Waters and That’s Fishy, p. 42 How Do You Perform a Controlled Experiment?, p. 5 How Can Scientists Learn from Observations?, p. 7

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Fusion Textbook	p.391A-490	p.391A-490		p.1A-56	p.1A-56	p.1A-56	p.1A-56	p.1A-56
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