

**Curriculum Map - Science - 5 Science**

Unit	State Standards	Outcomes	Essential Questions	Essential Skills	Assessments	Faith Integration
1st quarter						
Introduction to Middle School Science  <i>(updated 2/28/20)</i>	<p>SCI.CC1.3-5(I) Students identify similarities and differences in order to sort and classify natural objects and designed products. They identify patterns related to time, including simple rates of change and cycles, and use these patterns to make predictions.</p> <p>SCI.SEP1.A.3-5(I) Students ask questions that specify qualitative relationships. This includes the following:                      •Ask questions about what would happen if a variable is changed.                      •Identify scientific (testable) and non-scientific (non-testable) questions.                      •Ask questions that can be investigated and predict reasonable outcomes based on patterns such as cause and effect relationships.</p> <p>SCI.SEP1.B.3-5(I) Students use prior knowledge to describe and define simple design problems that can be solved through the development of an object, tool, process, or system. They include several criteria for success and constraints on materials, time, or cost.</p> <p>SCI.SEP4.A.3-5(I) Students begin to use quantitative approaches to collect data and conduct multiple trials of qualitative observations. (When possible, digital tools should be used.) This includes the following:                      •Represent data in tables or various graphical displays (bar graphs, pictographs, and pie charts) to reveal patterns that indicate relationships.                      •Analyze and interpret data to make sense of phenomena, using logical reasoning, mathematics, or computation.                      •Compare and contrast data collected by different groups in order to discuss similarities and differences in their findings.                      •Analyze data to refine a problem statement or the design of a proposed object, tool, or process.                      •Use data to evaluate and refine design solutions.</p>		1.What do scientists do? a. How do scientists test their hypothesis? b. How do scientists analyze data? c.How do scientists draw conclusions?	Observe Variables  Experiment Form a hypothesis Interpret  Data Communicate Measure Use Numbers Predict Make a model Infer	Students will list the steps in the scientific method. Daily Exit Tickets Activities based on using the scientific method	BIBLE: Genesis 1. CREATION
Our Dynamic Earth  <i>(updated 2/28/20)</i>	<p>SCI.ESS.A.5(I) Stars range greatly in size and distance from Earth, and this can explain their relative brightness</p> <p>SCI.ESS.B.5(I) The Earth's orbit and rotation, and the orbit of the moon around the Earth cause observable patterns.</p> <p>SCI.ESS.C.4(I) Certain features on Earth can be used to order events that have occurred in a landscape.</p> <p>SCI.ESS2.A.4(I) Four major Earth systems interact. Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, organisms, and gravity break rocks, soils, and sediments into</p>		How can we describe Earth's features? What happens when Earth's Plates Move? How do volcanoes shape the land? What are earthquakes and how do they occur? How do weathering and erosion shape the land?	READING SKILLS  INQUIRY SKILLS Sequence  Communicate Infer  Infer Problem and Solution Observe  Experiment	Discover Activities Labs' Quizzes Lesson Test Chapter Test ELL-picture dictionary Exit Tickets Performance Assessment page 179 (group work) Integrated Reading page 176-177	Look at the natural disasters in the Bible have shaped the Earth today.

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	<p>smaller pieces and move them around.</p> <p><b>SCI.ESS2.B.4(I)</b> Earth's physical features occur in patterns, as do earthquakes and volcanoes. Maps can be used to locate features and determine patterns in those events.</p> <p><b>SCIE.ESS2.C.5(I)</b> Most of Earth's water is in the ocean, and much of the Earth's freshwater is in glaciers or underground.</p>					
<p><b>Protecting Earth's Resources</b></p> <p><i>(updated 2/28/20)</i></p>	<p><b>SCI.ESS.C.4(A)</b> Certain features on Earth can be used to order events that have occurred in a landscape.</p> <p><b>SCI.ESS2.A.4(A)</b> Four major Earth systems interact. Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, organisms, and gravity break rocks, soils, and sediments into smaller pieces and move them around.</p> <p><b>SCI.ESS2.B.4(A)</b> Earth's physical features occur in patterns, as do earthquakes and volcanoes. Maps can be used to locate features and determine patterns in those events.</p> <p><b>SCIE.ESS2.C.5(I)</b> Most of Earth's water is in the ocean, and much of the Earth's freshwater is in glaciers or underground.</p> <p><b>SCI.ESS3.A.4(I)</b> Energy and fuels humans use are derived from natural sources, and their use affects the environment. Some resources are renewable over time, others are not.</p> <p><b>SCI.ESS3.B.4(I)</b> A variety of hazards result from natural processes; humans cannot eliminate hazards but can reduce their impacts.</p> <p><b>SCI.ESS3.C.5(I)</b> Societal activities have had major effects on the land, ocean, atmosphere, and even outer space. Societal activities can also help protect Earth's resources and environments.</p>		<p>What are the properties of minerals and rocks? What makes up soil and how is it conserved? What sources of energy are available to people? How are clean air and water important to living things?</p>	<p><b>READING SKILLS:</b> INQUIRY</p> <p><b>SKILLS:</b> summarize</p> <p>experiment cause and effect</p> <p>explore classify</p> <p>inquiry investigation main idea and details interpret data</p>	<p>Unit Test Chapter/lesson tests Quizzes Lab work Exit Tickets End of lesson questions <b>DAILY EXIT QUESTION</b> Biome report Book report Scientific Method: Order of; correct writing of hypothesis; data;</p>	<p>Natural events that occurred in the Bible: flood, darkness during the day,</p>
<p><b>Weather Patterns</b></p> <p><i>(updated 2/28/20)</i></p>	<p><b>SCIE.ESS2.C.5(A)</b> Most of Earth's water is in the ocean, and much of the Earth's freshwater is in glaciers or underground.</p> <p><b>SCI.ESS2.D.3(A)</b> Climate describes patterns of typical weather conditions over different scales and variations. Historical weather patterns can be analyzed.</p> <p><b>SCI.ESS2.E.4(I)</b> Living things can affect the physical characteristics of their environment.</p>		<p>What factors in the atmosphere affect weather? How do air masses, fronts, and water vapor affect weathers? What causes severe weather? What factors determine an area's climate?</p>	<p><u>Reading Skills:</u></p> <p><u>Inquiry Skills:</u></p> <p>Compare and contrast</p> <p>Measure Draw conclusions</p> <p>Interpret data Cause and Effect Use</p> <p>numbers Classify</p> <p>Observe</p> <p>Infer</p>	<p>Chapter Test Lesson Quizzes Lab work Lesson work Daily Exit Question</p>	<p>Creation Weather patterns talked about in the Bible</p>
<b>Unit</b>	<b>State Standards</b>	<b>Outcomes</b>	<b>Essential Questions</b>	<b>Essential Skills</b>	<b>Assessments</b>	<b>Faith Integration</b>

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2nd quarter						
Unit	State Standards	Outcomes	Essential Questions	Essential Skills	Assessments	Faith Integration
The Universe <i>(updated 2/28/20)</i>	<p>SCI.ESS.A.5(I) Stars range greatly in size and distance from Earth, and this can explain their relative brightness</p>		<p>What happens as Earth moves around the Sun? What happens as the Moon moves around Earth? What are the componets of our solar system? Whar are the characteristics of stars and how are they organized?</p>	<p><u>Reading Skills</u> <u>Inquiry</u> <u>Skills</u> Fact and Opinion model Sequence  Observe Infer  Interpret data Problem andn Solution Infer  Communicate</p>	<p>Chapter Test Lesson Quizzes Lesson Review Vocabulary work Writing (page 438) Lab work Daily Exit Question</p>	<p>Creation: The heavens</p>
Comparing Kinds of Matter <i>(updated 2/28/20)</i>	<p>SCI.PS1.A.5(I) Matter exists as particles that are too small to see. Matter is always conserved even if it seems to disappear. Measurements of a variety of observable properties can be used to identify particular materials. SCI.PS1.B.5(I) Chemical reactions that occur when substances are mixed can be identified by the emergence of substances with different properties.</p>		<p>How can the properties of matter be measured? What are the building blocks of matter? What are the properties of metals, nonmetals, and metalloids?</p>	<p>READING: INQUIRY SKILLS: Classify Measure Interpret data Main Idea and Details Observe  Infer Compare and Contrast Communicate Classify  Experiment</p>	<p>Textbook generated written tests Oral test Daily Exit Tickets Lab work Group work</p>	<p>God made everything. All matter. Why did He make it so exact and orderly?</p>
Physical and Chemical Changes <i>(updated 2/28/20)</i>	<p>SCI.PS1.A.5(I) Matter exists as particles that are too small to see. Matter is always conserved even if it seems to disappear. Measurements of a variety of observable properties can be used to identify particular materials. SCI.PS1.B.5(I) Chemical reactions that occur when substances are mixed can be identified by the emergence of substances with different properties. SCI.PS1.B.6(I) In chemical reactions the total mass remains the same.</p>		<p>How does matter change when energy is added or removed? How are mixtures formed and separated? How do atoms combine to form molecules and compounds? What are the properities of acids, bases, and salts?</p>	<p>READING: INQUIRY SKILLS: Fact and Opinion Measure Observe Infer Interpret data Communicate Draw Conclusions Experiment Infer Summarize Predict Classify</p>	<p>Textbook generated written tests Oral tests Vocabulary review work Jeopardy Game Lab work Group work</p>	<p>Father, Son, and Spirit are all God Ice, liquid water, and water vapor are all water</p>
3rd Quarter						
Using Forces <i>(updated 2/28/20)</i>	<p>SCI.PS2.A.3(I) Qualities of motion and changes in motion require description of both size and direction. SCI.PS2.A.4(I) The effect of unbalanced forces on an object results in a change of motion. SCI.PS2.A.5(I) Patterns of motion can be used to predict future motion. SCI.PS2.B.3(I)</p>		<p>How is motion measured? How do forces affect motion? How are work and energy related? How do machines make our lives easier?</p>	<p>READING: INQUIRY SKILLS: Sequence Interpret data  Cause and Effect Infer Experiment</p>	<p>Labs' Quizzes Lesson Test Chapter Test ELL-picture dictionary Exit Tickets</p>	<p>Calculate the force Jesus needed to carry His own cross to Calvary.</p>

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	<p>Some forces act through contact, some forces (e.g. magnetic, electrostatic) act even when the objects are not in contact.</p> <p>SCI.PS2.B.5(I) The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center.</p> <p>SCI.PS3.A.4(I) Moving objects contain energy. The faster the object moves, the more energy it has.</p> <p>SCI.PS3.B.4(I) Energy can be moved from place to place by moving objects, or through sound, light, or electrical currents. Energy can be converted from one form to another form.</p> <p>SCI.PS3.C.4(I) When objects collide, contact forces transfer energy so as to change objects' motions.</p>			<p>Compare and Contrast Communicate</p> <p>Fact and Opinion Use numbers</p>		
<p>Using Energy <i>(updated 2/28/20)</i></p>	<p>SCI.PS3.A.4(I) Moving objects contain energy. The faster the object moves, the more energy it has.</p> <p>SCI.PS3.B.4(I) Energy can be moved from place to place by moving objects, or through sound, light, or electrical currents. Energy can be converted from one form to another form.</p> <p>SCI.PS3.C.4(I) When objects collide, contact forces transfer energy so as to change objects' motions.</p> <p>SCI.PS3.D.4(I) Plants capture energy from sunlight which can be used as fuel or food.</p> <p>SCI.PS3.D.5(I) Stored energy in food or fuel can be converted to useable energy.</p>		<p>How is heat transferred? What are the properties of sound? How does light travel and interact with sound? What is electricity and how do we use it? How do magnets work?</p>	<p>READING: INQUIRY</p> <p>SKILLS: Compare and contrast Observe Interpret data Classify</p> <p>Communicate Classify Draw conclusions Infer</p> <p>Measure Main idea and details Make a model Summarize Experiment</p>	<p>Labs' Quizzes Lesson Test Chapter Test ELL-picture dictionary Exit Tickets</p>	<p>Show how a light year is possible even with the belief in a young Earth.</p>
<p>Human Body Systems - Health <i>(updated 2/28/20)</i></p>	<p>SCI.LS1.A.4(I) Plants and animals have both internal and external macroscopic structures that allow for growth, survival, behavior, and reproduction.</p> <p>SCI.LS1.B.3(I) Reproduction is essential to every kind of organism. Organisms have unique and diverse life cycles.</p> <p>SCI.LS3.A.3(I) Many characteristics of organisms are inherited from their parents. Other characteristics result from individuals' interactions with the environment. Many characteristics involve both inheritance and environment.</p> <p>SCI.LS3.B.3(I) Different organisms vary in how they look and function because they have different inherited information; the environment also affects the traits that an organism develops.</p> <p>SCI.LS4.A.3(I) Some living organisms resemble organisms that once lived on Earth. Fossils provide evidence about the types of organisms and environments that existed long ago.</p> <p>SCI.LS4.B.3(I) Differences in characteristics between individuals of the same species provide</p>		<p>What is the function of the skeletal system, the circulatory system, the respiratory system, the digestive system, the excretory system, the muscular system, and the immune system? How do these system work together to allow an organism to thrive and survive?</p>	<p>READING: INQUIRY</p> <p>SKILLS: Sequence Observe Interpret data</p> <p>Cause and Effect Infer Experiment Compare and Contrast Communicate</p> <p>Fact and Opinion Use numbers</p>	<p>Labs' Quizzes Lesson Test Chapter Test ELL-picture dictionary Exit Tickets</p>	<p>God made us all unique, but very much the same. Look at how all the systems He blessed us with help us in worshipping Him.</p>

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	<p>advantages in surviving and reproducing.</p> <p>SCI.LS4.C.3(I) Particular organisms can only survive in particular environments.</p> <p>SCI.LS4.D.2(I) Biodiversity and Humans</p>					
<b>Unit</b>	<b>State Standards</b>	<b>Outcomes</b>	<b>Essential Questions</b>	<b>Essential Skills</b>	<b>Assessments</b>	<b>Faith Integration</b>
<b>4th Quarter</b>						
<p><b>Cells and Kingdoms</b></p> <p><i>(updated 2/28/20)</i></p>	<p>SCI.LS1.A.4(I) Plants and animals have both internal and external macroscopic structures that allow for growth, survival, behavior, and reproduction.</p> <p>SCI.LS1.B.3(I) Reproduction is essential to every kind of organism. Organisms have unique and diverse life cycles.</p> <p>SCI.LS1.C.5(I) Food provides animals with the materials and energy they need for body repair, growth, warmth, and motion. Plants acquire material for growth chiefly from air, water, and process matter, and obtain energy from sunlight, which is used to maintain conditions necessary for survival.</p> <p>SCI.LS1.D.4(I) Different sense receptors are specialized for particular kinds of information; animals use their perceptions and memories to guide their actions.</p> <p>SCI.LS2.A.5(I) The food of almost any animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants, while decomposers restore some materials back to the soil.</p> <p>SCI.LS2.B.5(I) Matter cycles between the air and soil and among organisms as they live and die.</p> <p>SCI.LS2.C.3(I) When the environment changes, some organisms survive and reproduce, some move to new locations, some move into</p> <p>SCI.LS2.D.3(I) Being part of a group helps animals obtain food, defend themselves, and cope with changes.</p>		<p>What are the structures of plant and animal cells? How are living things similar and different? What are the structures of plants and their functions? How are different types of animals grouped? How do body systems work together to carry our life functions?</p>	<p>READING: INQUIRY</p> <p>SKILLS: Compare and contrast Observe Interpret data Classify</p> <p>Communicate Classify Draw conclusions Infer Measure Main idea and details Make a model Summarize Experiment</p>	<p>Reading and writing vocabulary worksheets Jeopardy game Assessments (verbal, written, lab work, group work)</p>	<p>Bible: Genesis 1-Creation of plants and animals -uses of plants in the Bible -farming practices in the Bible -animals in the Bible</p>
<p><b>Parents and Offspring</b></p> <p><i>(updated 2/28/20)</i></p>	<p>SCI.LS3.A.3(I) Many characteristics of organisms are inherited from their parents. Other characteristics result from individuals' interactions with the environment. Many characteristics involve both inheritance and environment.</p> <p>SCI.LS3.B.3(I) Different organisms vary in how they look and function because they have different inherited information; the environment also affects the traits that an organism develops.</p> <p>SCI.LS4.A.3(I) Some living organisms resemble organisms that once lived on Earth. Fossils provide evidence about the types of organisms and environments that existed long ago.</p> <p>SCI.LS4.B.3(I)</p>		<p>How do living things reproduce? How do plants grow, develop, and reproduce? How do animals grow, develop, and reproduce? How do organisms acquire their traits?</p>	<p>READING: INQUIRY</p> <p>SKILLS: Sequence Observe Interpret data</p> <p>Cause and Effect Infer Experiment Compare and Contrast Communicate</p> <p>Fact and Opinion Use numbers</p>	<p>Vocabulary reviews Textbook generated quizzes and tests Verbal quizzes and tests Group work Lab work Jeopardy game</p>	<p>Bible: Genesis 1: -Creation of living things. -God's plan for reproduction.</p>

Differences in characteristics between individuals of the same species provide advantages in surviving and reproducing.  
SCI.LS4.D.2(I)  
Biodiversity and Humans