

Science 7<sup>th</sup> grade

Next Generation Science Standards					
MS-LS1	From Molecules to Organisms: Structures and Processes				
MS-LS2	Ecosystems; Interactions, Energy, and Dynamics				
MS-LS3	Heredity: Inheritance and Variation of Traits				
MS-LS4	Biological Evolution: Unity and Diversity				
MS-ETS1	Engineering Design				
Technology					
SMART Board, Elmo, projector, computer, iPads, YouTube					
Standards	Essential Questions	Content	Skills	Assessment	Resources
<b>Scientific Method</b> MS-ETS1	<b>Scientific Method</b> How can the scientific method be used to solve a question or problem?	<b>Scientific Method</b> -Question and inferences -Hypothesis -Research and Experiment -Data -Result analysis -Conclusion -Lab safety	<b>Scientific Method</b> -Name and explain the steps -Utilize past knowledge and observations to form a question -Develop a hypothesis -Gain background knowledge on topic through research -Carry out a guided experiment -Identify constants and outliers within an experiment -Understand the difference between dependent and independent variables -Construct an organized table and graph to analyze data -Analyze and communicate results to prove or disprove hypothesis -Discuss the importance of repeating experiment -Model appropriate lab safety rules and procedures	<b>Scientific Method</b> -Lab -Test	<b>Scientific Method</b> - <i>Elevate Science Life</i> by Pearson (2019) -Lab kits

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Standards	Essential Questions	Content	Skills	Assessment	Resources
<b>Molecules to Organisms</b> MS-LS1	<b>Molecules to Organisms</b> How do simple cells make complex organisms?	<b>Molecules to Organisms</b> -Living vs. nonliving -Classification -Unicellular vs. multicellular -Cell structure and function -Organization: cell, tissue, organ, organ system -Organ systems: circulatory, digestive, respiratory, muscular, skeletal, nervous, urinary, excretory, endocrine, integumentary, lymphatic, reproductive -Photosynthesis vs. cellular respiration	<b>Molecules to Organisms</b> -Understand characteristics of living organisms and nonliving things -Understand the eight hierarchy levels of living things -Complete dichotomous key -Compare and contrast unicellular and multicellular organisms -Model cell structure -Describe cell structure functions -Recognize the levels of organization in the human body -Know that there are different kinds of cells and tissues -Understand the basic functions of organs in human body systems -Know the purpose of the body systems -Compare and contrast photosynthesis and cellular respiration	<b>Molecules to Organisms</b> -Lab -Test	<b>Molecules to Organisms</b> - <i>Elevate Science Life</i> by Pearson (2019) -Lab kits
<b>Heredity</b> MS-LS3	<b>Heredity</b> How are traits passed from parent to offspring?	<b>Heredity</b> -DNA -Genes -Chromosomes -Sexual and asexual reproduction -Gene mutation: helpful, hurtful, neutral -Inherited traits -Acquired traits	<b>Heredity</b> -Know relationship between DNA, genes, and chromosomes -Model mitosis and meiosis -Know the difference between helpful, hurtful, and neutral gene mutations using examples -Differentiate between inherited and acquired traits -Generate various Punnett squares	<b>Heredity</b> -Lab -Test	<b>Heredity</b> - <i>Elevate Science Life</i> by Pearson (2019) -Lab kits

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<b>Evolution</b> MS-LS4	<b>Evolution</b> How has life evolved?	<b>Evolution</b> -Evidence of change -Adaptations -Natural selection -Artificial selection -Ethics and morals	<b>Evolution</b> -Identify key changes in organisms over time -Understand survival of the fittest -Discuss the pros and cons of Genetically Modified Organisms (GMO) -Discuss the Catholic church's stance on evolution	<b>Evolution</b> -Lab -Class discussion	<b>Evolution</b> - <i>Elevate Science Life</i> by Pearson (2019) -Lab kits
<b>Ecosystems</b> MS-LS2	<b>Ecosystems</b> How do living and nonliving things impact one another?	<b>Ecosystems</b> -Biodiversity -Human impact	<b>Ecosystems</b> -Demonstrate how biodiversity affects how living and nonliving organisms interact in an ecosystem	<b>Ecosystems</b> -Project -Labs	<b>Ecosystems</b> - <i>Elevate Science Life</i> by Pearson (2019) -Lab kits