

Under Revision

Grade 8 Curriculum Map Last Revised - February 2026

Trimester 1					
Math 8 Illustrative Math	Algebra 7/8	Geometry CT Curriculum	Social Studies	Science	Language Arts
<p><b><u>Unit 1:</u></b> Rigid Transformations and Congruence</p> <p>Translations Rotations Reflections on the Coordinate Plane</p> <p>Congruence and Polygons</p> <p>Parallel Lines Cut by a Transversal</p> <p><b><u>Unit 2:</u></b> Dilations, Similarity, Slope</p> <p>Projecting and Scaling</p> <p>Circular Grid Dilations Similarity Similar Triangles and Polygons</p>	<p><b><u>Chapter 1:</u></b> Real Numbers</p> <p>Fractions Order of Operations Operations with Real Numbers Algebraic Expressions Properties of Real Numbers</p> <p><b><u>Chapter 2:</u></b> <u>Equations and Inequalities</u></p> <p>Solve Linear Equations -One-step -Two-step -Multi-step Formulas Problem Solving Linear Inequalities</p>	<p><b><u>Unit 1:</u></b> <u>Coordinates and transformations</u></p> <p>Pythagorean Theorem Distance Formula Vectors and translations Angles and rotations Composition of Transformations Symmetry Isometries</p> <p><b><u>Unit 2:</u></b> <u>Congruence, Constructions, and Proofs</u></p> <p>ASA and SAS Congruence Isosceles Triangles SSS</p>	<p><b><u>Colonial America:</u></b> 1585-1760's</p> <p>-Roanoke -Jamestown -Plymouth -Pequot War -King Philip's War -Northern Colonies -Middle Colonies -Southern Colonies -Salem Witch Trials -Young George Washington -French and Indian War -Life in the Colonies</p> <p><b><u>Revolutionary War:</u></b> 1760's-1780's</p> <p>-Boston Massacre -Proclamation of</p>	<p><b>Structure, Function, and Information Processing-</b> cells <a href="#">MS-LS1-1</a> <a href="#">MS-LS1-2</a></p> <p><b>Objective and Essential Questions</b> -“How do the structures of organisms contribute to life’s functions?” -Living organisms are made of cells</p> <p><b>Stemscores:</b> -Cells -Anatomy of a Cell</p> <p><b>PBL:</b> Cell Model</p> <p><b>Structure, Function, and Information Processing-</b> Body Systems <a href="#">MS-LS1-3</a> <a href="#">MS-LS1-8</a></p> <p><b>Objective and Essential Questions</b> -Special structures are</p>	<p>Building Blocks/Foundational Skills --grammar --elements of story</p> <p>The Short Story –”The Gift of the Magi” (O’Henry) –”An Uncomfortable Bed” (deMaupassant) – “The Dinner Party” (Gardner) – “Thank You, Ma’am” (Hughes) –”The Open Window” (Saki) –”All Summer in a Day” (Bradbury”</p> <p>Essay– defending theme in literature</p> <p>Greek &amp; Latin roots (vocabulary)</p>

<p>Slope Equations for Lines</p> <p><b>Unit 3: Linear Relationships</b></p> <p>Proportional Relationships -Graphs -Equations -Comparing</p> <p>Linear Relationships <math>y=mx+b</math> Calculate slope Horizontal and Vertical Lines</p>	<p><b>Chapter 3:</b> <u>Graphs, Equations of Lines, Functions, Variation</u></p> <p>Rectangular Coordinates Graphs of Linear equations Slope Point-Slope Form Slope-Intercept Form Functions Variation</p>	<p>Congruence Vertical Angles Parallel Lines</p> <p><b>Unit 3:</b> <u>Polygons</u></p> <p>Triangles -Interior Angle Sum -Exterior Angles Inequalities in triangles Parallel and Perpendicular Lines Regular Polygons Quadrilateral</p>	<p>1763 -Intolerable Acts Boston Massacre -Boston Tea Party -Lexington &amp; Concord -Bunker Hill -Declaration of Independence -Thomas Knowlton -Famous Figures</p>	<p>responsible for particular functions in organisms</p> <p><b>Stemscores:</b> -Bodies and Systems -Sensory Receptors</p> <p><b>PBL:</b> Body systems poster and presentation</p>	<p>Public Speaking- -Book talk</p>
<p><b>Trimester 2</b></p>					

<p><b><u>Unit 4: Linear Equations and Linear Systems</u></b></p> <p>Keep the Equation Balanced Solving Any Linear Equation All, Some, or No Solutions</p> <p>Systems of Equations -Graph -Substitution</p> <p><b><u>Unit 5: Functions and Volume</u></b></p> <p>Introduction to Functions -Equations -Tables -Graphs</p> <p>Linear Functions Modeling Piecewise Linear Functions</p> <p>Cylinders and Cones -Volume -Finding other Dimensions</p>	<p><b><u>Chapter 7: Systems of Equations</u></b></p> <p>Solve Systems by -Graphing -Substitution -Elimination</p> <p>Solve Systems of Linear Inequalities</p> <p><b><u>Chapter 4: Polynomials</u></b></p> <p>Exponent Rules Zero and Negative Exponents Scientific Notation Polynomials -add and subtract -multiply/divide</p> <p><b><u>Chapter 5: Factoring</u></b></p> <p>GCF of Polynomials Factor by Grouping</p> <p>Factoring -Difference of</p>	<p><b><u>Unit 4: Similarity and Trigonometry</u></b></p> <p>Dilations Similar Figures</p> <p>Parallel Lines in triangles Similarity in Right triangles Right Triangle Trig</p> <p>30-60-60 45-45-90 Special Right triangles</p> <p><b><u>Unit 5: Circles and other Conics</u></b></p> <p>Equations of Circles Radii and Chords Central Angles and Arcs Tangents Angle Bisectors Inscribed and Circumscribed Circles</p> <p>Parabolas</p>	<p><b><u>American Government: 1780's-Present Day</u></b></p> <p>-Articles of Confederation -Shay's Rebellion -Federalists &amp; Anti-Federalists -U.S. Constitution -Federalism -Congress -Executive Branch -Judicial Branch -State &amp; Local Government -Letter to Congressman -Applying the Bill of Rights</p> <p><b><u>Westward Expansion: 1770's - 1890's</u></b></p> <p>-Manifest Destiny -Louisiana Purchase -Lewis &amp; Clark Expedition -Daniel Boone -Tecumseh -Andrew Jackson -Trail of Tears</p>	<p><b><u>Structure, Function, and Information Processing-</u></b> Probability of successful reproduction <a href="#">MS-LS1-4</a> <a href="#">MS-LS1-5</a> <a href="#">MS-LS1-6</a></p> <p><b><u>Objective and Essential Questions</u></b></p> <p>-Understand how the environment and genetic factors determine the growth of an individual organism -Genetic implications for sexual and asexual reproduction -Understand structures and behaviors that increase the likelihood of successful reproduction by organisms</p> <p><b><u>Stemscopes:</u></b> -Reproduction of Plants and Animals -Growth of Organisms -Introduction to Photosynthesis</p> <p><b><u>PBL:</u></b> Structure and behavior research project</p> <p><b><u>Heredity:</u></b> Inheritance and variation of traits</p>	<p>The Hero's Journey</p> <p>Novel Study: <i>The Giver</i></p> <p>Research Essay: Biography– Hall of Fame (Student choice: any recognized hall of fame member)</p>
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<p>Spheres -Volume -Estimating Hemispheres</p>	<p>Two Squares -Trinomials <math>a = 1</math> -Trinomials <math>a \neq 1</math> -Sum and Difference of Two Cubes</p> <p>Solve by Factoring Applications</p>		<p>-Republic of Texas -Mexican-American War -Technological Advancements (i.e. Railroads) -California Gold Rush -Homestead Act</p> <p><b><u>Slavery &amp; the Abolitionist Movement:</u></b> <i>1619-1865</i></p> <p>-The Middle Passage -The Amistad -Free State &amp; Slave State -Primary Source Analysis of Formerly Enslaved People -Harriet Tubman -Frederick Douglass -Harriet Beecher Stowe -Resisting Enslavement -Underground Railroad -Sectionalism -John Brown</p>	<p><a href="#">MS-LS3-1</a> <a href="#">MS-LS3-2</a></p> <p><b>Objective and Essential Questions</b> “How do organisms grow, develop, and reproduce?”</p> <p>-Understand mitosis vs meiosis -Understand asexual vs sexual reproduction</p> <p><b>Stemscopes:</b> -Inheritance and Genetic Variation -Genes and Proteins -Mutations</p> <p><b>PBL:</b> Baby Monsters lab Building Pigeons lab</p> <p><b>Natural Selections and Adaptations</b> <a href="#">MS-LS4-1</a> <a href="#">MS-LS4-2</a> <a href="#">MS-LS4-3</a> <a href="#">MS-LS4-4</a> <a href="#">MS-LS4-6</a> <a href="#">MS-LS4-5</a></p> <p><b>Objective and Essential Questions</b> “How does genetic variation among organisms in a species affect survival and reproduction?”</p>	
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			-Modern Slavery	-Analyze data from the fossil record to describe evidence of the history of life on Earth <b>Stemscores:</b> -Fossil Records -Evolutionary History and Relationships -Embryonic Similarities -Natural Selection -Artificial Selection <b>PBL:</b> -Horses of Assateague -Balls in the circle CER	
<b>Trimester 3</b>					
<p><b><u>Unit 7:</u></b> Exponents and Scientific Notation</p> <p>Exponent Rules (focus on Powers of 10) -multiplying -dividing -Powers of powers -Rational Bases</p> <p>Scientific Notation Represent: Large numbers Small numbers Operations:</p>	<p><b><u>Chapter 6:</u></b> <u>Rational Equations; Ratio and Proportion</u></p> <p>Simplify Rational Expressions Multiply and Divide Rational Expressions Add and Subtract Rational Expressions Complex Fractions Solving Equations containing Rational</p>	<p><b><u>Unit 6:</u></b> <u>3-Dimensional Geometry</u></p> <p>Polygons and Polyhedra Nets and Surface Area Volume Cross-Sections Spheres</p> <p><b><u>Unit 7:</u></b> <u>Probability</u></p> <p>Sample Spaces Theoretical and</p>	<p><b><u>U.S. Civil War</u></b> <i>1861-1865</i></p> <p>-Election of Lincoln -Fort Sumter -Bullrun -Brothers Divided -Famous Figures: Lee, Jackson, Grant, Sherman, Clara Barton -Antietam -Emancipation Proclamation -Gettysburg -New York City Draft Riots</p>	<p><b>Matter and Energy in Organisms and Ecosystems</b> <u>MS-LS1-6</u> <u>MS-LS1-7</u> <u>MS-LS2-1</u> <u>MS-LS2-3</u> <u>MS-LS2-4</u> <b>Objective and Essential Questions</b> “How do organisms obtain and use matter and energy? How do matter and energy move through an ecosystem?”</p>	<p>Poetry Unit</p> <p>Public Speaking: Present a Poem</p> <p>Shakespeare: <i>Twelfth Night</i></p> <p>Informational writing: –Themes in short stories Novel: <i>Letters from Rifka</i> –Research &amp; Research paper: Pioneers (Explore</p>

<p>Add Subtract Multiply Divide Estimate</p> <p><b>Unit 8:</b> <u>Pythagorean Theorem and Irrational Numbers</u></p> <p>Squares: area vs. side length Rational and Irrational Numbers Square Roots on a Number Line</p> <p>Proof of the Pythagorean Theorem Converse of the Theorem Finding Side Lengths</p> <p>Cubes: Side length vs. Volume Cube Roots</p> <p>Repeating Decimal to Fraction</p> <p><b>Unit 6:</b> Associations in Data</p>	<p>Expressions Applications Ratios Proportions and Similar Triangles</p> <p><b>Chapter 8:</b> <u>Radicals and Radical Equations</u></p> <p>Square Roots The Pythagorean Theorem Simplify Radicals Operations with Radicals Solve Equations containing Radicals Distance Formula</p> <p><b>Chapter 9:</b> <u>Quadratic Equations</u></p> <p>Solving with -Square Root Property -Completing the Square -Quadratic Formula</p> <p>Graph Quadratic Functions Complex and Imaginary Numbers</p>	<p>Experimental Probability Independent Events Conditional Probability Two Way Tables</p>	<p>-“Hard War” -Appomatox Surrender -Lincoln Assassination</p> <p><b>Reconstruction</b> 1865 - 1877</p> <p>-Lost Cause Myth -Jim Crow Laws -Freedmen Massacres -Origin of the Civil Rights Movement</p> <p><b>End of the Frontier</b> 1860’s - 1890’s</p> <p>-Great Plains Horse Culture -Near Extinction of Buffalo -Comanche &amp; Lakota -Reservation Life -“Wild West” -Famous Figures: Crazy Horse, Quanah Parker, Luther Standing Bear, Sitting Bull -The Significance</p>	<p>-Understand the role of photosynthesis in cycling matter in ecosystems -How organisms obtain matter and energy from the ecosystem to survive and grow</p> <p><b>Stemscores:</b> -Competition in Ecosystems -Organism Interactions in Ecosystems -Flow of Energy in Ecosystems -Dynamic Nature of Ecosystems</p> <p><b>PBL:</b> Food chain and food web research poster</p> <p><b>Interdependent Relationships in Ecosystems</b> Biodiversity MS-LS2-2 MS-LS2-5</p> <p><b>Objective and Essential Questions</b> -Understand interactions in ecosystems to maintain biodiversity -Understand that organisms and</p>	<p>a pioneer in a field of students’ choice)</p> <p>–Exploring Poetry</p> <p>–Shakespeare: <i>A Midsummer Night’s Dream</i></p>
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<p>Organizing Data  Scatter Plots  Fitting a Line to data  Describing Trends  Observing Patterns  Analyzing Bivariate data</p>			<p>of the Frontier in American History</p> <p><b>Gilded Age</b>  1870 - 1890's</p> <ul style="list-style-type: none"> <li>-Industrial Revolution Overview</li> <li>-Factory System</li> <li>-Carnegie &amp; Rockefeller</li> <li>-Labor Unions</li> <li>-Homestead Massacre</li> <li>-Immigration in America</li> <li>-Ellis Island</li> <li>-Chinese Exclusion Act</li> <li>-Women's Suffrage</li> <li>-Teddy Roosevelt</li> </ul>	<p>populations of organisms are dependent on their environmental interactions, both with other organisms and with nonliving factors</p> <p><b>Stemscopes:</b></p> <ul style="list-style-type: none"> <li>-Relationships in Ecosystems</li> <li>-Ecosystem Biodiversity</li> </ul> <p><b>PBL:</b></p> <p>Biome Box Project and presentations</p>	
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