

Mystic Valley Regional Charter School

Fifth Grade Curriculum Matrix

	Reading - Direct Instruction	Mathematics - Saxon	Science - Core Knowledge	History - Core Knowledge
August/ September	<p>Decoding Vocabulary Literal Comprehension Inferential Comprehension Literary Skills Literary Devices</p> <p>Deductions Sentence analysis Punctuation Editing Paragraph writing Reasoning</p> <p>Literature: <u>The Secret Garden</u></p>	<ol style="list-style-type: none"> 1) Read and write whole numbers 2) Recognize place value in whole numbers 3) Number patterns and sequencing 4) Compare and order numbers 5) Fact families 6) Ordinal numbers 7) Number lines 8) Even and odd numbers 9) Equality and inequality 10) Factors, multiples and divisibility 11) Addition, subtraction and multiplication with regrouping 12) Division with remainders 13) Fractions and mixed numbers 14) Numerator and denominator 15) Add, subtract, multiply and divide money amounts. 16) Order of operations 17) Simplify expressions 18) Solve for the unknown in an equation 19) Identify point, line, segment, ray or angle 20) Identify horizontal, vertical and oblique 21) Convert, regroup or simplify units of measure 22) Identify units of temperature: 23) Identify units of time: hours, minutes, and time notation; days, months, year, decades 24) Combinations/permutations 25) Solve multiple-step problems 26) Patterns 	<p><i>Matter, Elements, and Atoms</i></p> <ul style="list-style-type: none"> • Properties of the three common states of matter • Make-up of matter • Make-up of atoms (protons, electrons, neutrons) • Elements • The Periodic Table • Properties of metals and non-metals • Newlands, Mendeleev, and Meyer • Formulas of common compounds (water, salt, carbon dioxide) • Physical and chemical change 	<p><i>Ancient Civilizations: Mayans, Aztecs, and Incas</i></p> <ul style="list-style-type: none"> • Geography of Central and South America • Ancient civilizations • Archeology • Mayans • Aztecs • Art and symbolism in ancient civilizations
October	<p>Decoding Vocabulary</p>	<ol style="list-style-type: none"> 1) Read and write whole numbers 2) Recognize place value in whole 	<p><i>Classification of Living Things</i></p> <ul style="list-style-type: none"> • Classification of animals 	<p><i>Tools of European Explorers and World Geography</i></p>

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	Literal Comprehension Inferential Comprehension Literary Skills Literary Devices Deductions Sentence analysis Punctuation Editing Paragraph writing Reasoning Literature: <u>The Secret Garden</u>	numbers 3) Number patterns and sequencing 4) Compare and order numbers 5) Fact families 6) Ordinal numbers 7) Number lines 8) Even and odd numbers 9) Equality and inequality 10) Factors, multiples and divisibility 11) Addition, subtraction and multiplication with regrouping 12) Division with remainders 13) Fractions and mixed numbers 14) Numerator and denominator 15) Add, subtract, multiply and divide money amounts. 16) Order of operations 17) Simplify expressions 18) Solve for the unknown in an equation 19) Identify point, line, segment, ray or angle 20) Identify horizontal, vertical and oblique 21) Convert, regroup or simplify units of measure 22) Identify units of temperature: 23) Identify units of time: hours, minutes, and time notation; days, months, year, decades 24) Combinations/permutations 25) Solve multiple-step problems 26) Patterns	<ul style="list-style-type: none"> • Classification of plants • Divisions of classification (Kingdoms, divisions within kingdoms) Taxonomy	<ul style="list-style-type: none"> • The Spice Islands • Landmarks of European Trade between the 15th and 17th centuries • Relationship of natural resources to world trade • European exploration and trade (Portuguese, Spanish, Dutch, English, and French) • Treaty of Tordesillas • Routes taken by explorers • Tools of exploration
November	Decoding Vocabulary Literal Comprehension Inferential Comprehension Literary Skills Literary Devices	1) Read and write whole numbers 2) Recognize place value in whole numbers 3) Number patterns and sequencing 4) Compare and order numbers 5) Fact families	<i>Early Models of the Universe</i> <ul style="list-style-type: none"> • Aristotle and Ptolemy • Geocentric and heliocentric models of the universe • Copernicus and Galileo 	<i>The Renaissance</i> <ul style="list-style-type: none"> • Transition from the Dark and Medieval ages to the Renaissance era • New trade, wealth, and the Italian city-states

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	<p>Deductions Sentence analysis Punctuation Editing Paragraph writing Reasoning</p> <p>Literature: <u>The Lion, Witch and the Wardrobe</u></p>	<p>6) Ordinal numbers 7) Number lines 8) Even and odd numbers 9) Equality and inequality 10) Factors, multiples and divisibility 11) Addition, subtraction and multiplication with regrouping 12) Division with remainders 13) Fractions and mixed numbers 14) Numerator and denominator 15) Add, subtract, multiply and divide money amounts. 16) Order of operations 17) Simplify expressions 18) Solve for the unknown in an equation 19) Identify point, line, segment, ray or angle 20) Identify horizontal, vertical and oblique 21) Convert, regroup or simplify units of measure 22) Identify units of temperature: 23) Identify units of time: hours, minutes, and time notation; days, months, year, decades 24) Combinations/permutations</p> <p>25) Solve multiple-step problems 26) Patterns</p>	<ul style="list-style-type: none"> • Role of the Catholic Church • Model of the Universe • Models of the earth • Maps and globes • <u>Starry Messenger</u> • Solar systems • Galaxies <p><i>Energy: Melting, Freezing, and Boiling Points</i></p> <ul style="list-style-type: none"> • Properties of matter • Molecular attraction • Phases of matter • Melting, freezing, boiling, and condensation 	<ul style="list-style-type: none"> • Patrons of the Arts and Learning • Artists of the Renaissance • Physical and political geography of Europe

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			<ul style="list-style-type: none"> • Melting and boiling and points of various substances • Three means of heat transfer (convection, conduction, and radiation) • Insulation • Expansion and contraction • Thermometer Chemical composition and properties of water	
December	Decoding Vocabulary Literal Comprehension Inferential Comprehension Literary Skills Literary Devices Deductions Sentence analysis Punctuation Editing Paragraph writing Reasoning Writing Stories Writing Letters Literature: <u>Old Yeller</u>	Continue previous skills 1) Read and write Roman numbers 2) Number concept: 1 3) Factors, multiples and divisibility 4) Perfect squares and square roots 5) Adding and subtracting fractions and mixed numbers 6) Multiplication 7) Divide whole numbers with quotient as a mixed numeral 8) Mixed numbers 9) Equivalent fractions 10) Least common denominator 11) Simplify expressions 12) Parallel, perpendicular, and intersecting lines 13) Horizontal, vertical and oblique 14) Classify polygons 15) Radius, diameter and circumference 16) Similar and congruent figures 17) Customary and metric measurement 18) Perimeter of polygons 19) Average 20) Combinations/permutations 21) Round and estimate 22) Compass directions 23) Solve multi-step problems	<i>Energy: Melting, Freezing, and Boiling Points</i> <ul style="list-style-type: none"> • Properties of matter • Molecular attraction • Phases of matter • Melting, freezing, boiling, and condensation • Melting and boiling and points of various substances • Three means of heat transfer (convection, conduction, and radiation) • Insulation • Expansion and contraction • Thermometer Chemical composition and properties of water	<i>The Reformation</i> <ul style="list-style-type: none"> • Protestant Reformation and Catholic Counter Reformation • The Golden Age • The English Revolution • English Bill of Rights and American Bill of Rights and Constitution

Mystic Valley Regional Charter School

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January	<p>Decoding Vocabulary Literal Comprehension Inferential Comprehension Literary Skills Literary Devices</p> <p>Deductions Sentence analysis Punctuation Editing Paragraph writing Reasoning Writing Stories Writing Letters</p> <p>Literature: <u>Windcatcher</u></p>	<p><i>Continue previous skills</i></p> <ol style="list-style-type: none"> 1) Read and write Roman numbers 2) Number concept: 1 3) Factors, multiples and divisibility 4) Perfect squares and square roots 5) Adding and subtracting fractions and mixed numbers 6) Multiplication 7) Divide whole numbers with quotient as a mixed numeral 8) Mixed numbers 9) Equivalent fractions 10) Least common denominator 11) Simplify expressions 12) Parallel, perpendicular, and intersecting lines 13) Horizontal, vertical and oblique 14) Classify polygons 15) Radius, diameter and circumference 16) Similar and congruent figures 17) Customary and metric measurement 18) Perimeter of polygons 19) Average 20) Combinations/permutations 21) Round and estimate 22) Compass directions 23) Solve multi-step problems 	<p><i>Cells</i></p> <ul style="list-style-type: none"> • Parts of a microscope • Structure of cells • Functional cell shapes • Cell division and organization • Scientific method • Ernest Just 	<p><i>Early Russian and Feudal Japan</i></p> <ul style="list-style-type: none"> • Geography of Russia • Early growth and expansion of Russia (Ivan the Great and Ivan the Terrible) • Continuing expansion of Russia (Peter the Great, Catherine the Great) • Geography of Japan • Feudal Japan • Religion in Feudal Japan • Haikus
February	<p>Decoding Vocabulary Literal Comprehension Inferential Comprehension Literary Skills Literary Devices</p> <p>Deductions Sentence analysis Punctuation Editing</p>	<p><i>Continue previous skills</i></p> <ol style="list-style-type: none"> 1) Read and write Roman numbers 2) Number concept: 1 3) Factors, multiples and divisibility 4) Perfect squares and square roots 5) Adding and subtracting fractions and mixed numbers 6) Multiplication 7) Divide whole numbers with quotient as a mixed numeral 8) Mixed numbers 	<p><i>Simple Machines</i></p> <ul style="list-style-type: none"> • Force • Units of measurement • Magnetism • Gravity • Compass • Physics of familiar processes • Mathematical formulas for work and speed <p>Inclined plane, wedge, screw, lever, wheel</p>	<p><i>Westward Expansion</i></p> <ul style="list-style-type: none"> • Biographies (Daniel Boone, Sacajawea, Jedidiah Smith, Brigham Young, Pike and the Forty-Niners) • Monuments • Reasons people chose to move west • "Oregon Trail" • Geography relevant to Westward Expansion

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	Paragraph writing Reasoning Writing Stories Writing Letters Literature: <u>Runner</u>	9) Equivalent fractions 10) Least common denominator 11) Simplify expressions 12) Parallel, perpendicular, and intersecting lines 13) Horizontal, vertical and oblique 14) Classify polygons 15) Radius, diameter and circumference 16) Similar and congruent figures 17) Customary and metric measurement 18) Perimeter of polygons 19) Average 20) Combinations/permutations 21) Round and estimate 22) Compass directions 23) Solve multi-step problems	and axle, and pulley	Westward Expansion <ul style="list-style-type: none"> • Buffalo Place • Interaction of pioneers with Native Americans • Manifest Destiny • Land conflicts
March	Decoding Vocabulary Literal Comprehension Inferential Comprehension Literary Skills Literary Devices Study Skills Deductions Sentence analysis Punctuation Editing Paragraph writing Reasoning Writing Stories Writing Letters Literature: <u>White Mountains</u>	<i>Continue previous skills</i> 1) Perfect squares and square roots 2) Cubes and cube roots 3) Prime and composite 4) Greatest common factor 5) Addition and subtraction of decimals 6) Multiply and divide fractions 7) Compare fractions 8) Convert improper to mixed numerals 9) Convert fractions to decimals 10) Properties of operations 11) Line segments, rays and lines 12) Classify angles 13) Classify geometric solids 14) Similar and congruent figures 15) Convert or simplify units of measures 16) Volume of prisms 17) Identify a pattern	<i>Compound and Complex Machines</i> <ul style="list-style-type: none"> • Combining simple machines • Purpose and functioning of compound machines • Functioning and by-products of complex machines • Gears • Friction Lubrication	<i>Toward the Civil War</i> <ul style="list-style-type: none"> • Causes of the Civil War • Mason-Dixon Line • The effects of <u>Uncle Tom's Cabin</u>, the Dred Scott Decision, and John Brown • Events leading to the Civil War • Confederate attack on Fort Sumter • Jefferson Davis • Battle of Bull Run • Battles of the U.S.S. Monitor and C.S.S. Virginia • Union Admiral David Farragut's capture of New Orleans • Confederate General Lee's withdrawal to Virginia • Emancipation Proclamation • The Gettysburg Address • Battles of the Civil War • Lincoln's reelection

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				<ul style="list-style-type: none"> • Reconstruction • Freedman's Bureau and "40 acres and a mule" • The 13th, 14th, and 15th Amendments • Black Codes • The Ku Klux Klan • Compromise of 1877 • <i>O Captain, My Captain</i>
April	Decoding Vocabulary Literal Comprehension Inferential Comprehension Literary Skills Literary Devices Study Skills Deductions Sentence analysis Punctuation Editing Paragraph writing Reasoning Writing Stories Writing Letters Literature: <u>King of the Wind</u>	<i>Continue previous skills</i> 1) Perfect squares and square roots 2) Cubes and cube roots 3) Prime and composite 4) Greatest common factor 5) Addition and subtraction of decimals 6) Multiply and divide fractions 7) Compare fractions 8) Convert improper to mixed numerals 9) Convert fractions to decimals 10) Properties of operations 11) Line segments, rays and lines 12) Classify angles 13) Classify geometric solids 14) Similar and congruent figures 15) Convert or simplify units of measures 16) Volume of prisms 17) Identify a pattern	<i>Simple Machines continued</i>	Continuation of previous month
May	Decoding Vocabulary Literal Comprehension Inferential Comprehension	<i>Continue previous skills</i> 1) Integers 2) Place value 3) Factors, multiples and divisibility	<i>Plants</i> <ul style="list-style-type: none"> • Photosynthesis • Structure of plants • Glucose 	<i>Wild West</i> <ul style="list-style-type: none"> • Cowboys, Buffalo Soldiers, and the Wild West • Mining

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	Literary Skills Literary Devices Study Skills Deductions Sentence analysis Punctuation Editing Paragraph writing Reasoning Writing Stories Writing Letters Literature: <u>The Mixed Up Files of Mrs. Basil E. Frankweiler</u>	4) Perfect squares and square roots 5) Cube and cube roots 6) Approximation and rounding 7) Least common multiple 8) Negatives 9) Addition and subtraction of decimals 10) Addition and subtraction of fractions 11) Multiplication and division of decimals 12) Least common denominator 13) Identify/find percent of a group or set 14) Write percents as fractions 15) Personal finances 16) Coordinate planes 17) Lines of symmetry 18) Graph coordinates 19) Square and cubic units 20) Area of simple figures 21) Average 22) Probability/chance Ratios, proportion or scale	<ul style="list-style-type: none"> • Food chains 	<ul style="list-style-type: none"> • Railroads
June	Decoding Vocabulary Literal Comprehension Inferential Comprehension Literary Skills Literary Devices Study Skills Deductions Sentence analysis Punctuation Editing Paragraph writing Reasoning Writing Stories	<i>Continue previous skills</i> 1) Integers 2) Place value 3) Factors, multiples and divisibility 4) Perfect squares and square roots 5) Cube and cube roots 6) Approximation and rounding 7) Least common multiple 8) Negatives 9) Addition and subtraction of decimals 10) Addition and subtraction of fractions 11) Multiplication and division of decimals 12) Least common denominator	<i>Plants continued</i>	<i>Cultures in Conflict</i> <ul style="list-style-type: none"> • Relationship between caucasians and Native Americans in the United States • United States policy toward Native American <i>Region of the United States</i> <ul style="list-style-type: none"> • Weather and climate • The Gulf Stream and its effects on the climates of coastal regions of North America • Geography of the United States

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	Writing Letters Literature: <u>Incredible Journey</u>	13) Identify/find percent of a group or set 14) Write percents as fractions 15) Personal finances 16) Coordinate planes 17) Lines of symmetry 18) Graph coordinates 19) Square and cubic units 20) Area of simple figures 21) Average 22) Probability/chance 23) Ratios, proportion or scale		

Reading— Reading instruction takes place in small groups based on individual student skill. Placement tests are used at the beginning of the year to accurately assign students to groups and then given throughout the year to determine mobility within the groups. As a result, not all students in Fifth Grade follow the same course of study at the same pace. Strong decoding skills are combined with comprehension strategies to enable students to understand what they read and make stories come alive. The goal is for all students to be confident, strategic, independent readers. The following concepts and standards are addressed in Fifth Grade, yet do not follow the same sequence of study for all students. As a result, some of the skills noted below may have carried over from Fourth grade for some students and may carry over to Sixth Grade for others, depending on students' level of mastery.

Mathematics— Math instruction in fifth grade is presented incrementally and builds on concepts introduced in previous lessons. Each lesson contains continually daily practice to reinforce skills taught throughout the year. The main components of the program include: basic facts practice, mental math and problem solving; daily lesson of new skills; daily practice of new skills; and a daily problem set that includes all material studied thus far in the school year.

History and Geography— In the Fifth grade, the History and Geography curriculum continues to focus on United States and World History. Students will learn about the exploration, the explorers, and the long-term effects of these journeys. Student will also learn about the Ancient Romans and the parts of modern society that were derived from this culture. Within the area of Geography, students will continue to build on their spatial understanding and their geographic vocabulary.

Science— The Science curriculum in the Fifth grade will explore a variety of topics in Life Science, Physical Science, Earth and Space Science and Technology/Engineering. Instruction will focus on hands-on experiences and observation while also building reading and writing skills. Students will conduct experiments and read literature that will broaden their understanding of scientific concepts.

Character Education— The character education program at Mystic Valley Regional Charter School is literature based. Students listen to, read and discuss literature and how the stories exemplify the virtue of the month. The goal is to cultivate character through the promotion of basic moral, civic and intellectual virtues.¹

Music and Visual Arts— Music and the arts are an integral part of the curriculum focusing on creativity and active participation. Instruction is non-competitive and provides significant opportunities to sing, dance, listen to music, play act, listen to and read poetry, draw, paint, and create. In addition, children are also exposed to great pieces of art and music.

¹ Klee, Mary Beth; Core Virtues 2000